

2:15-cv-01045-RFB-PAL

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

UNITED STATES DISTRICT COURT
DISTRICT OF NEVADA

CUNG LE, et al.,)	
)	
Plaintiffs,)	Case No. 2:15-cv-01045-RFB-PAL
)	
vs.)	Las Vegas, Nevada
)	Thursday, September 12, 2019
ZUFFA, LLC, d/b/a Ultimate)	9:06 a.m.
Fighting Championship and)	
UFC,)	EVIDENTIARY HEARING, DAY FIVE
)	
Defendants.)	

REPORTER'S TRANSCRIPT OF PROCEEDINGS

THE HONORABLE RICHARD F. BOULWARE, II,
UNITED STATES DISTRICT JUDGE

APPEARANCES: See Pages 2 and 3

COURT REPORTER: Patricia L. Ganci, RMR, CRR
United States District Court
333 Las Vegas Boulevard South, Room 1334
Las Vegas, Nevada 89101

Proceedings reported by machine shorthand, transcript produced
by computer-aided transcription.

2:15-cv-01045-RFB-PAL

1 APPEARANCES:

2 For the Plaintiffs:

3 **DON SPRINGMEYER, ESQ.**4 WOLF, RIFKIN, SHAPIRO, SCHULMAN & RABKIN, LLP
3556 E. Russell Road, 2nd Floor
Las Vegas, Nevada 89120
(702) 341-52005 **ERIC L. CRAMER, ESQ.**6 **PATRICK F. MADDEN, ESQ.**7 **MARK R. SUTER, ESQ.**8 BERGER & MONTAGUE, P.C.
1818 Market Street, Suite 3600
Philadelphia, Pennsylvania 19103
(215) 875-30009 **DANIEL H. SILVERMAN, ESQ.**10 COHEN, MILSTEIN, SELLERS & TOLL, PLLC
11 1100 New York Avenue, NW, Suite 500 West
Washington, DC 20005
12 (202) 408-460013 **JOSEPH SAVERI, ESQ.**14 **JOSHUA P. DAVIS, ESQ.**15 THE JOSEPH SAVERI LAW FIRM, INC.
555 Montgomery Street, Suite 1210
San Francisco, California 94111
16 (415) 500-6800

17 For the Defendants:

18 **J. COLBY WILLIAMS, ESQ.**19 CAMPBELL & WILLIAMS
700 South 7th Street
Las Vegas, Nevada 89101
20 (702) 382-522221 **WILLIAM A. ISAACSON, ESQ.**22 **STACEY K. GRIGSBY, ESQ.**23 **NICHOLAS A. WIDNELL, ESQ.**24 **JOHN GERARDI, ESQ.**25 **ADAM SHAW, ESQ.****SUSAN NERO, ESQ.**BOIES, SCHILLER & FLEXNER, LLP
1401 New York Avenue, NW
Washington, DC 20015
(202) 237-2727

2:15-cv-01045-RFB-PAL

1 APPEARANCES CONTINUED:

2 **BRENT K. NAKAMURA, ESQ.**
 3 BOIES, SCHILLER & FLEXNER, LLP
 4 1999 Harrison Street, Suite 900
 Oakland, California 94612
 (510)874-1000

6 ALSO PRESENT:

7 Riche McKnight, Esq., Zuffa

8
 9 INDEX OF EXAMINATIONS

10	TESTIMONY OF ALAN MANNING	
	Direct Examination by Mr. Davis.....	12
11	Cross-Examination by Mr. Isaacson.....	52
12	TESTIMONY OF PAUL BOYER	
	Direct Examination by Ms. Grigsby.....	94
13	Cross-Examination by Mr. Davis.....	140
	Continued Cross-Examination by Mr. Davis.....	

15 LAS VEGAS, NEVADA; THURSDAY, SEPTEMBER 12, 2019; 9:06 A.M.

16 --oOo--

17 P R O C E E D I N G S

18 THE COURT: Please be seated.

19 COURTROOM ADMINISTRATOR: Now calling Le, et al.,
 20 versus Zuffa, Case Number 2:15-cv-01045-RFB-BNW. This is the
 21 time for Evidentiary Hearing, Day 5.

22 Counsel for plaintiffs, please note your appearance for
 23 the record.

24 MR. DAVIS: Joshua Davis for plaintiffs.

25 MR. CRAMER: Eric Cramer, good morning, Your Honor, for

2:15-cv-01045-RFB-PAL

1 plaintiffs.

2 MR. SAVERI: Joseph Saveri on behalf of the plaintiffs.

3 MR. SUTER: Mark Suter for plaintiffs.

4 MR. MADDEN: Patrick Madden for the plaintiffs.

5 MR. SILVERMAN: Dan Silverman for the plaintiffs.

6 MR. SPRINGMEYER: Good morning, Your Honor. Don
7 Springmeyer for plaintiffs.

8 MR. ISAACSON: Good morning, Your Honor. Bill Isaacson
9 for Zuffa.

10 MR. NAKAMURA: Good morning, Your Honor. Brent
11 Nakamura for Zuffa.

12 MS. GRIGSBY: Good morning, Your Honor. Stacey Grigsby
13 for Zuffa.

14 MR. WIDNELL: Good morning, Your Honor. Nicholas
15 Widnell for Zuffa.

16 MR. WILLIAMS: Good morning, Your Honor. Colby
17 Wilmington on behalf of Zuffa.

18 MS. NERO: Good morning. Susan Nero for Zuffa.

19 THE COURT: Good morning. Thank you all for coming in
20 a little bit earlier. I have to adjust our schedule a little
21 bit today, and so what I'd like to do is proceed today in this
22 way. We'll have testimony until about, oh, 10:20, 10:25, maybe
23 10:30. We need to take a break until about -- for about two
24 hours or so, two and a half hours. We'll come back between
25 12:45 and 1, and then go until about 4. So that should give us

2:15-cv-01045-RFB-PAL

1 about three and a half or so hours with the witnesses.

2 And I wasn't sure about what the parties had worked out
3 regarding the testimony, whether or not Professor Manning,
4 Professor Oyer -- whether or not Professor Manning in particular
5 has to leave, Mr. Davis, early or not. Because I actually would
6 like for Professor Manning to actually testify again after
7 Professor Oyer, after he hears Professor Oyer's testimony.

8 MR. DAVIS: He does not have to leave, Your Honor.
9 He's available all day, and so we're very happy to do that.

10 THE COURT: And so we'll do about -- I'm going to give
11 the parties about 45 minutes for the first round per witness, so
12 an hour and a half or so for Professor Manning, an hour and a
13 half for Professor Oyer, and then about a half hour at the end
14 for Professor Manning again.

15 Any questions about that schedule?

16 MR. DAVIS: Your Honor, so the same amount -- my
17 apologies. The same amount of time for direct and cross for
18 each?

19 THE COURT: Yes, about 45 minutes each. I don't know
20 that we'll need more than that. I mean, I think actually it may
21 even be less than that. In this case, really, it's focussed on,
22 as the parties know, the issue of the use of -- or wage share,
23 labor share, or whatever the terms that are different that are
24 used, and the exceptions of that in the literature, and the
25 examples of that in terms of literature, and why it would or

2:15-cv-01045-RFB-PAL

1 would it not be an appropriate measure and why -- or why it
2 would or would not be an appropriate measure in the context of
3 this case. You know, and in this case, you know, Professor Oyer
4 and Professor Manning's reports are very specific as relates to
5 that.

6 So I don't even know that we'll need that much time for
7 each of the witnesses. I've gone through their reports, and
8 their reports are very specific. And I have some very specific
9 questions for them. But I don't think we'll need that much
10 time.

11 MR. DAVIS: Thank you, Your Honor.

12 THE COURT: Okay. Mr. Isaacson, any questions?

13 MR. ISAACSON: No questions, Your Honor.

14 THE COURT: Okay. Wow. We're off to a fabulous start
15 from both counsel. All right. Why don't we go ahead and get
16 started then.

17 Don't take your seat just yet.

18 THE WITNESS: I need to be sworn.

19 ALAN MANNING, having duly been sworn, was examined and
20 testified as follows:

21 COURTROOM ADMINISTRATOR: Thank you. Sir, please state
22 and spell your name for the record.

23 THE WITNESS: May name is Alan Manning, A-L-A-N, M-A
24 double N-I-N-G.

25 THE COURT: Go ahead, Mr. Davis.

2:15-cv-01045-RFB-PAL

1 MR. DAVIS: Thank you, Your Honor.

2 THE COURT: You don't need to go through, for either
3 experts, their background or C.V., I mean, except to the extent
4 you want to ask them to talk about experience they may have in a
5 particular area of analysis regarding sort of antitrust cases
6 and anything similar to this. But I've looked at their C.V.s.
7 you know, they're equally impressive. I don't need to --

8 MR. DAVIS: I was just going to start by asking whether
9 I should skip the qualifications.

10 THE COURT: Yes.

11 MR. DAVIS: And so what I will do is, with Your Honor's
12 permission, in order to stay true to what I understand
13 Your Honor's preferences to be, I will at certain moments sort
14 of proffer testimony that's possible. And then I fully
15 anticipate Your Honor will say you don't need to hear it, and I
16 will move on. So, qualifications, that was the first one.

17 Let me -- so since you raised the issue of experience,
18 let me just very briefly ask.

19 DIRECT EXAMINATION OF ALAN MANNING

20 BY MR. DAVIS:

21 Q. Professor Manning, I believe you served as a witness in one
22 United States antitrust class action in the past. Is that
23 right?

24 **A.** Yes.

25 Q. And what case was that?

2:15-cv-01045-RFB-PAL

1 **A.** That was the High Tech Antitrust cold calling or no poaching
2 case.

3 **Q.** And was the class certified in that case?

4 **A.** It was.

5 **Q.** Okay. And that's the only time you served as an expert
6 witness in a U.S. antitrust class action other than this one.
7 Is that right?

8 **A.** Yes.

9 **Q.** Okay. And we'll come back to that a bit -- a bit later.

10 All right. Let's turn to --

11 **MR. DAVIS:** If I may, Your Honor, just a very brief --
12 and it will be brief -- overview of Professor Manning's opinions
13 before we launch into the first substantive one?

14 **THE COURT:** You don't need to do that.

15 **MR. DAVIS:** Okay. So --

16 **THE COURT:** I reviewed -- I mean, I've reviewed the --
17 I mean, Professor Manning is very clear about when and when he
18 doesn't think that wage share would be appropriate, actually
19 outlines in his report exactly what are the conditions under
20 which he thinks it would be appropriate.

21 So --

22 **MR. DAVIS:** Right. So I'll turn to that -- I'd like to
23 turn to those criteria. This is by the way of a proffer to
24 expedite once again. Let me just say that I had prepared
25 questions which I think we don't need about a bunch of

2:15-cv-01045-RFB-PAL

1 definitions: wage share, wage level, monopsony power, marginal
2 revenue product of labor --

3 THE COURT: So what would be helpful would be for the
4 parties for both experts, I think, to focus on the issue of why
5 in this particular case, or why not sort of wage share/labor
6 share would be appropriate as opposed to sort of absolute levels
7 of compensation, why there are a fair number of studies that
8 talk about or use absolute level of compensation and relates to
9 sort of labor market analysis and competitive -- and
10 competitive -- the competitiveness of markets, and why in this
11 case that absolute level may or may not be appropriate and what
12 are the reasons why they make the choices that they do.

13 And I have some understanding of that, obviously, from
14 their expert opinions, but if we could flesh that out a little
15 bit, given what we've heard so far in the hearing over the
16 course of the past few days.

17 MR. DAVIS: That would be perfect. So let me turn to
18 that.

19 And as I do so, let me just point out that I'm -- I've
20 now made it a third of the way through my outline. So --

21 THE COURT: Oh, great.

22 MR. DAVIS: -- remarkably efficient.

23 BY MR. DAVIS:

24 Q. So let's turn to -- you prepared this slide on the criteria
25 for using wage share. Is that correct, Professor Manning?

2:15-cv-01045-RFB-PAL

1 **A.** Yes.

2 **Q.** Okay. And your first opinion is about when it is
3 appropriate to use wage share, correct?

4 **A.** Yes.

5 **Q.** Okay. So why don't you talk me through the three criteria,
6 very briefly, that -- what do these three criteria show?

7 **A.** Well, the first criterion is, you know, what is the question
8 that's trying to be asked here. And the question is how to
9 actuate his actual compensation compared to what they would be
10 in a competitive market, and that strikes me as the essence of
11 the question we're trying to decide.

12 **Q.** And when there is that sort of question, just to be clear,
13 use of wage share can be appropriate. Is that correct?

14 **A.** Yes. That's my opinion.

15 **Q.** Okay. And let's talk about the second criterion. What's
16 that?

17 **A.** The second criterion is simply that you have to have a ...

18 (Interruption by the court reporter.)

19 THE WITNESS: So the second criterion is, the data is
20 actually available in order to -- to compute the wage share.
21 And in this particular case, the data is very, very rich in that
22 regard.

23 THE COURT: So I was curious when I read that in your
24 report, Professor Manning. Is it simply the case that that type
25 of information is not commonly available in sort of labor market

2:15-cv-01045-RFB-PAL

1 analysis? Because you talk a fair bit throughout your report
2 about how it's somewhat unique to have this sort of -- the
3 granular level of detail that you have in this case about
4 certain aspects -- certain aspects of sort of revenue and being
5 able to compute wage share. Can you talk to me a little bit
6 about how that's not so common and how it's unique in this case.

7 THE WITNESS: Yes. I mean, I'll talk, perhaps, about
8 the different sorts of data that we often have.

9 THE COURT: Okay.

10 THE WITNESS: So, for example, often we would have a
11 household survey. The household survey would ask you questions
12 about your age, your qual- -- education, your job, and so on.
13 It would ask you a question about how much you earn. Most
14 people know, you know, how much they earn. But it doesn't ask
15 questions about, well, what are the revenues of your employer?
16 I mean, most people wouldn't know the answer to that question.

17 THE COURT: Right.

18 THE WITNESS: And it wouldn't go further. If they
19 asked the question, which is relevant in this case is, well,
20 what portion of the firm's revenue -- of your employer's
21 revenues are down to your activities, I mean, nobody would be
22 able to really answer that question. So those kind of household
23 surveys, which are often the bread and butter of a lot of
24 research into labor market issues, just simply don't have
25 information on the firm-level revenues.

2:15-cv-01045-RFB-PAL

1 THE COURT: What about other studies that deal with
2 sort of competitive wages and where they're trying to look at
3 what the competitive wage is where there is and is not monopsony
4 power? In those types of analyses, do you see more industry or
5 firm-level data or is that still not common there?

6 So, for example, if I wanted to compare different tech
7 companies or hardware companies, is it possible to compare, for
8 example, Apple's production and the workers who are involved
9 with Apple's production with the workers who are involved with,
10 say for example, Dell? Do you have that type of information for
11 industry comparisons when you're looking at competitive wages?
12 Is that common?

13 THE WITNESS: Well, I think the answer is that it's
14 becoming more common. So, for example, when I, you know, wrote
15 my book 15 years ago, it was quite uncommon to have lots of
16 those firm-level data sets, but it's becoming more common. And
17 a lot of the very recent research looking at wage share, which
18 is a very rapidly growing area, is using that kind of data. But
19 often that data would just be at the level of using something
20 that's really like the firm's accounts. You would have total
21 revenues and you would have total compensation and total number
22 of employees, the sort of things that would appear in, you know,
23 financial statements of firms.

24 They wouldn't have what we have in this case, which is,
25 you know, a particular part of the firm's activities or an

2:15-cv-01045-RFB-PAL

1 event, the revenues associated with that, the workers --
2 particular workers involved in that, and how much they were paid
3 in relation to that.

4 So even though there is more firm-level data around,
5 it's still not as rich as the data that's available in this
6 particular case.

7 THE COURT: So you're saying if you wanted to do that
8 type of comparison, say for example, with Dell and Apple, you'd
9 have to know which department that particular worker worked in,
10 what the revenues were for that particular department as related
11 to its contributions to the over -- or I shouldn't say its
12 revenue -- the contribution of the productivity of that
13 department to the overall sort of share of the product that's
14 being created, you'd have to have that level of data to be able
15 to do kind of the wage share analysis?

16 THE WITNESS: Yes, you would have to move in that
17 direction, but it might be very hard because often people might
18 do a bit of work for this department, a bit of work for that
19 department, and so on. I mean, I think what is unusual here,
20 you've got an event, it's a discrete event, and you've got a
21 measure of the revenue that is coming from that event. You've
22 got a measure of the workers you know were involved in taking
23 part in that event, and the compensation they were paid.

24 So that's a feature of sort of, you know, this
25 particular case that I think is a bit different from the typical

2:15-cv-01045-RFB-PAL

1 data that we -- that we would be working with normally.

2 THE COURT: Okay. Thank you.

3 Go ahead, Mr. Davis.

4 MR. DAVIS: Thank you, Your Honor.

5 BY MR. DAVIS:

6 Q. And I think you've anticipated a bit the third criterion

7 which I want to turn to because the two are closely related.

8 Let me ask first, is it your opinion that these three criteria
9 are necessary or sufficient to use wage share?

10 A. My opinion is that they're sufficient, but not necessary.

11 Q. But not -- and just if you could take a moment and explain
12 exactly what you mean by that.

13 A. I mean that if these three conditions are satisfied, I think
14 that the use of wage share is appropriate, but it doesn't mean
15 that there aren't other circumstances in which the use of wage
16 share would be appropriate. But I just was confining myself to
17 saying, in this particular case, I think these conditions are
18 satisfied, and that's sufficient to justify the use of wage
19 share.

20 THE COURT: Thank you.

21 BY MR. DAVIS:

22 Q. So let's turn to the third criterion in which I think you
23 were already discussing a bit. What is the third criterion?

24 A. I mean, the third criterion is that you -- you -- there's a
25 tight link between the work of a particular group of workers, in

2:15-cv-01045-RFB-PAL

1 this case the fighters, and a particular revenue stream, in
2 particular the revenue stream for an event. And, you know, that
3 condition is satisfied in this case.

4 Q. Okay. Could you just -- for background and so we're all on
5 the same page, can you give an example when the third criterion
6 is not satisfied?

7 A. Yes, for example, in many situations when you buy a good or
8 a service, you're not very -- you're not at all interested in
9 who's providing that service or who's making that good. In my
10 report I give the example of wait staff in a restaurant, you
11 know, who -- well, who was the software engineer who made my
12 iPhone? I don't really know. I don't really care, to be
13 honest.

14 THE COURT: You can't charge more or less based upon
15 who actually made your iPhone.

16 THE WITNESS: It's about, you know, the product is the
17 iPhone, and the quality of the product which it determines how
18 much, you know, you pay for it. But, here, you know, the
19 product -- as I think has been said, the product in a way is the
20 fighters. The people paying to watch this care a lot about the
21 identity of the fighters.

22 THE COURT: And are you satisfied that that is actually
23 an established sort of statistically significant input as it
24 relates to the revenue? So, in other words, in terms of if you
25 look at the studies and things that have looked at the impact of

2:15-cv-01045-RFB-PAL

1 the fighters on the revenues here, you're satisfied that there's
2 a clear correlation and potentially even causation between the
3 particular fighter and revenue, increase or decrease in revenue?

4 THE WITNESS: Yes. I mean, I think there's a lot of
5 evidence to that effect. We know that sports that are more
6 popular that generate more revenue pay their athletes more than
7 sports that are less popular with -- with less revenue.

8 So I think -- I mean, it's also not just, you know, my
9 opinion as an economist. If we think about suddenly if I was
10 put on one of these cards, I was the identity of the person on
11 it, I have an awful feeling it wouldn't generate a great deal of
12 revenue.

13 THE COURT: So you're saying you couldn't generate the
14 revenues that maybe Conor McGregor could is what you're saying.

15 THE WITNESS: I have my doubts.

16 THE COURT: All right.

17 MR. DAVIS: Good.

18 THE COURT: Go ahead, Mr. Davis.

19 MR. DAVIS: Thank you, Your Honor.

20 BY MR. DAVIS:

21 Q. Does that analysis, the use of wage -- why use of wage share
22 is appropriate with MMA athletes, apply to the most famous
23 professional athletes generally and MMA athletes in particular?

24 **A.** Yes, it does.

25 Q. And does it also apply to the less famous athletes?

2:15-cv-01045-RFB-PAL

1 **A.** Yes, I believe it does. I mean, they make a smaller
2 contribution to the overall revenues of the event, but
3 nonetheless they make some contribution.

4 **Q.** Now, can you -- you said that one reason people pay to watch
5 an event, an MMA event, is the identity of the fighters. How
6 does that relate to use of wage share? Can you just connect
7 those two for me?

8 **A.** Yes, I think you can think of the fighters -- the identity
9 of the fighters as contributing to the revenues of the event.
10 So they're responsible for a share of the revenues from the
11 event. And wage share is what it says, it's a share as well.

12 **Q.** Okay. And how does the notion of proportionality between
13 the fighters' contributions to an MMA event and the revenues
14 from that event figure in?

15 **A.** Well, I -- if we think about a particular event and the
16 fighter -- the fighters participating in that event, and
17 suddenly twice as many people pay to watch that event, or
18 perhaps the same number of people but they pay twice as much to
19 watch it, so the revenues have doubled, then the contribution of
20 those individual fighters to that revenue has also doubled in
21 that situation.

22 **Q.** Okay. And I think you prepared a slide, this slide,
23 explaining why you believe there's a proportional relationship
24 between event revenues and compensation. Now -- so why don't
25 we -- I think you've addressed to some extent the first point

2:15-cv-01045-RFB-PAL

1 about the creation of a percentage of revenues by the pro -- by
2 the professional athletes. What about the second point? What
3 is that second point?

4 **A.** Well, the second point is that if you look at the literature
5 on sports economics, you see widespread use of the wage share to
6 summarize, for example, look at issues about how changes in, for
7 example --

8 MR. ISAACSON: Your Honor, Your Honor, I object.
9 There's no discussions of the sports economics articles in his
10 report.

11 THE COURT: Overruled. I'll allow this testimony and
12 Dr. -- and Professor Oyer can talk about it as well.

13 Go ahead, Professor Manning.

14 THE WITNESS: Okay. So I think that, you know, in a
15 lot of those literature on sports economics, they're using the
16 wage share. They're using the wage share for the same sort of
17 purpose as Dr. Singer is, for example, in this case, to try and
18 assess changes in the competitiveness of the market. A good
19 example would be the reserve clause from the sort of 1970s and
20 so on. So this is just very widespread, very commonplace in the
21 academic literature of sports economics.

22 BY MR. DAVIS:

23 Q. And what is the third basis -- your third basis for
24 concluding that the compensation of MMA fighters is proportional
25 to MMA event revenues?

2:15-cv-01045-RFB-PAL

1 **A.** Well, I think what the -- Dr. Singer's regression produces
2 very sensible results in the sense that --

3 MR. ISAACSON: Your Honor, again, this is not in his
4 report. In fact, his report, at paragraph 29, does not say that
5 Dr. Singer confirms proportionality. He says he assumes
6 proportionality.

7 THE COURT: So I've read the report. He talks about,
8 Professor Manning does, proportionality in various ways. I
9 think it's consistent with what the report says. Overruled.
10 I'll allow it.

11 Go ahead, Professor.

12 THE WITNESS: I think that the fact that Dr. Singer's
13 regression produces very sensible credible results in that if --
14 in the sense that as the foreclosure share, a measure of Zuffa's
15 market power increases, the wage share goes down, I think that
16 also lends support to the view that proportionality is -- is
17 appropriate.

18 THE COURT: Okay.

19 BY MR. DAVIS:

20 Q. And what is the fourth basis you have for concluding there's
21 a proportional relationship between event revenues and
22 compensation in MMA?

23 **A.** Well, I think Dr. Blair, in his testimony a few weeks ago,
24 essentially endorsed proportionality and the use of wage share.

25 MR. DAVIS: So if I might, Your Honor, we are going to

2:15-cv-01045-RFB-PAL

1 rely on just one interaction between Your Honor and Dr. Blair,
2 which we think was actually quite extraordinary and important to
3 this analysis. I think it will benefit from having
4 Professor Manning explain it and, of course, address any
5 questions Your Honor might have.

6 THE COURT: Okay.

7 BY MR. DAVIS:

8 Q. So the first paragraph, we don't need to read it word for
9 word, but if it's easier, you can look it over on the screen
10 next to you.

11 If you could briefly summarize -- so just for context,
12 briefly, Your Honor had asked Dr. Blair how he would go about
13 measuring the marginal revenue product of MMA fighters or of
14 boxers, and Dr. Blair candidly acknowledged he's a theoretician
15 or applied theoretician, not an empiricist. But -- and then
16 Your Honor asked: "Well, but as a matter of theory how might
17 you do this?" And this is Dr. Blair's response to that query.

18 So -- excuse me -- the first paragraph, Professor
19 Manning?

20 **A.** Yes. In the first paragraph he's essentially saying that
21 what you would likely -- like to be able to do to measure the
22 marginal revenue product of a particular athlete is to have two
23 similar events that differ only in the presence of one athlete
24 or another.

25 Q. Thank you. And then what does --

2:15-cv-01045-RFB-PAL

1 MR. DAVIS: Thank you very much.

2 BY MR. DAVIS:

3 Q. And then what does he say, if you could summarize briefly,
4 in the second paragraph?

5 A. And he says then that if you substitute one athlete -- the
6 examples he gives, I think, is a more famous -- Ronda Rousey is
7 the more famous athlete -- in an event for a less famous athlete
8 and you found that the revenues went up, that would be a measure
9 of the marginal revenue product of --

10 THE COURT: Which is the commonly understood way to
11 measure the actual --

12 THE WITNESS: Exactly.

13 THE COURT: -- appropriate wage -- competitive wage in
14 a market. Is that right?

15 THE WITNESS: Yes. Exactly. That's the reason it's
16 important, because that's what we think the wage would be in a
17 competitive market, the marginal revenue product.

18 THE COURT: All right.

19 BY MR. DAVIS:

20 Q. And what does this say about use of wage share to assess
21 marginal revenue product in this case?

22 A. Well --

23 THE COURT: I think it speaks for itself, Mr. Davis.

24 MR. DAVIS: Okay. Thank you.

25 THE COURT: You made your point.

2:15-cv-01045-RFB-PAL

1 MR. DAVIS: Thank you.

2 And, Your Honor, if you'll forgive my presumption, also
3 no need to ask about how this relates to proportionality?

4 THE COURT: Well, I think it's clear why it relates --
5 how it relates to proportionality. So, yes, there's no need to
6 ask that.

7 MR. DAVIS: Good. Thank you very much, Your Honor.

8 BY MR. DAVIS:

9 Q. And then if we could -- we'll turn -- the next two slides
10 are briefer in terms of text. But the next two slides -- and
11 that's -- then that's it for this particular passage.

12 So in slide 5 that you prepared, could you please
13 summarize what it is that -- the problem that Dr. Blair raises
14 for operationalizing this approach?

15 A. Well, there he's sort of saying that the problem is that
16 when we compare events, we're not normally just substituting one
17 fighter out for another, there's lots of different people
18 involved in different events, and that makes it a bit more
19 complicated.

20 Q. Thank you.

21 And then the last slide on this, I believe the Court
22 suggests a solution -- a potential solution, and then Dr. Blair
23 responds to that solution. If you could just summarize.

24 THE COURT: Well, Mr. Davis --

25 MR. DAVIS: Okay. Don't -- please don't summarize --

2:15-cv-01045-RFB-PAL

1 THE COURT: Well, no, no. It speaks for itself.

2 MR. DAVIS: It does speak for itself.

3 THE COURT: I appreciate that, so --

4 MR. DAVIS: Yes. Thank you, Your Honor.

5 BY MR. DAVIS:

6 Q. So let me just ask, based on this testimony, what
7 significance, if any, does it have for Dr. Singer's wage share
8 regression?

9 A. Well, a regression is a statistical method that is designed
10 explicitly to solve this problem, to isolate the impact of one
11 factor on the outcome, in this particular case the wage share,
12 while controlling for other factors, when there are lots
13 different factors varying all of the time. So the regression --
14 a regression analysis is exactly the solution to this particular
15 problem.

16 THE COURT: And so you're saying in this case wage
17 share can also be an appropriate measure because you have enough
18 information or other controlling factors that you can put them
19 in the regression analysis and control for their contributions
20 to marginal revenue product?

21 THE WITNESS: Exactly.

22 BY MR. DAVIS:

23 Q. All right. So in a sense, what Dr. Singer did is exactly
24 what Dr. Blair was hypothesizing would be an appropriate way to
25 proceed. Is that fair?

2:15-cv-01045-RFB-PAL

1 **A.** I think that's fair.

2 Q. Okay. Let me ask you a hypothetical. If Zuffa or WME had
3 internal documents that predicted a consistent wage share over
4 time, even while event revenues were increasing dramatically,
5 would that tell you anything about whether Zuffa or WME believed
6 fighter compensation and event revenues are proportional?

7 MR. ISAACSON: Your Honor, I object. He reviewed no
8 documents for his report and said he reviewed no documents.
9 This is just --

10 THE COURT: I think he's asking a hypothetical
11 question. I take it as a hypothetical, Mr. Isaacson. I don't
12 take it as a -- necessarily a comment on this. So overruled.
13 I'll allow it.

14 Go ahead.

15 THE WITNESS: Yes, if one saw that when there was a
16 projection of an increase in revenue and associated with that
17 was an increase in compensation in the same proportion such that
18 the wage share remains constant, that to me is the definition of
19 proportionality. It's not just to me. That is the definition
20 of proportionality. So that would suggest that those companies,
21 you know, used proportionality in their own internal analysis
22 and projections.

23 BY MR. DAVIS:

24 Q. Thank you.

25 And would -- is proportionality, as you've described

2:15-cv-01045-RFB-PAL

1 it, more consistent with Dr. Singer's use of wage share or
2 Dr. Topel's argument that wage share should not be used?

3 **A.** It's more consistent with Dr. Singer's use and not with
4 Dr. Topel's.

5 **Q.** And could you just briefly explain why that is.

6 **A.** Well, in Dr. Singer's regression, which has wage share on
7 the left-hand side, if there is a doubling in revenue, there's
8 going to be a doubling in compensation. So the wage share
9 remains constant. They're both going to increase in the same
10 proportion.

11 In contrast, Dr. Topel, he has some regressions in
12 which he doesn't have event revenues at all anywhere in the
13 model. In that case he would have that an increase in revenues
14 has no effect on compensation whatsoever. So there's not a
15 proportionality between the two. And then he also has some
16 regressions in which he does include event revenue in a
17 different way to Dr. Singer, but in those he finds there's a
18 very small effect of event revenue on compensation. So that,
19 for example, a doubling of event revenue is only leading to an
20 8 percent increase in -- in compensation. And that, then,
21 implies there's no -- no proportionality. The wage share would
22 be falling in that case.

23 **Q.** And I'm just going to turn to a slide. I think you prepared
24 a slide that very simply demonstrates the difference in -- as
25 event revenues double, the change in wage share that Dr. Singer

2:15-cv-01045-RFB-PAL

1 predicts versus the change in wage share that Dr. Topel's
2 regression predicts. Could you please just describe what you've
3 put in this slide.

4 **A.** Yes. So in this hypothetical example we're starting with an
5 event that raises \$10 million. The wage share is assumed to be
6 20 percent, which is about what it is with the challenged
7 conduct. So the initial compensation of the fighters would be
8 2 million.

9 Then we want to compare that -- then we want to compare
10 that with another event that has twice the revenue, 20 million.
11 The Singer regression would imply that the compensation of the
12 fighters would also double, 2 million to 4 million, and the wage
13 share would remain at 20 percent.

14 In contrast, the Topel regression would imply that the
15 compensation only goes from 2 to 2.16 million, and that implies
16 that the wage share would go from 20 percent to under
17 11 percent.

18 THE COURT: And why is that significant to you,
19 Professor Manning?

20 THE WITNESS: And that's significant because -- well,
21 if we go back, for example, to that hypothetical example we
22 talked a bit about, the companies a minute or so ago, if the
23 companies were themselves predicting that when we double
24 revenue, we double compensation, the wage share remains
25 constant, that would be consistent with Dr. Singer's regression,

2:15-cv-01045-RFB-PAL

1 but it would not be consistent with Dr. Topel's regression.

2 THE COURT: Okay.

3 BY MR. DAVIS:

4 Q. So what -- I'd like to now switch topics to -- we've gone
5 through the sort of first two of Professor Manning's opinions,
6 that wage share can be appropriate and that it is appropriate in
7 this case. And then the last major opinion is about concerns
8 about the wage level regressions as they've been done in this
9 case. So I'd like to turn to that, if I may. And that relates
10 to the last comment that you made, Professor Manning.

11 You've -- the opinion -- what is your third opinion
12 about the uses -- the regressions in this case that use wage
13 level as a dependent variable?

14 A. My opinion is that they're inappropriate and the results
15 from them are unreliable.

16 Q. And why is that?

17 A. Well, I think there are two reasons why one would think
18 that -- that they're not very plausible. The first is that
19 there's really a very weak link, as we've just been discussing,
20 between the event revenues and compensation. And we know, for
21 example, that sports that generate more revenue have much higher
22 compensation and so on, and that's just not what something like
23 the Topel regression would imply. He has a very weak or no link
24 between revenues and compensation in his regressions.

25 So I think that when he saw that as his result, in some

2:15-cv-01045-RFB-PAL

1 sense an alarm bell should have gone off in his mind that
2 there's something not quite right here. And then thinking
3 about, well, what's not quite right, I think the technical
4 problem there is with his regression is a problem that's known
5 as endogeneity bias, and that causes the results of his
6 regressions to be unreliable.

7 Q. So let's turn to a slightly more technical explanation of
8 endogeneity bias and why you have concluded that it arises in
9 this case.

10 MR. DAVIS: Your Honor, I know you've already shown
11 great sophistication about regressions. I won't -- with your
12 permission, I'll skip over describing portions of this
13 regression that -- that would no doubt be obvious to you.

14 I'll just note, so this is a simplified version of
15 Dr. Topel's regression. The wage level is the dependent
16 variable. We've noted some of the key independent variables,
17 foreclosure share, event revenues, and there's a bunch of others
18 and they all have a coefficient, and then there's the residual.
19 So that's just what we're looking at so that we can use that as
20 a point of departure for this discussion.

21 BY MR. DAVIS:

22 Q. So, Professor Manning, what is endogeneity -- endogeneity
23 bias as it is relevant to this context, if you could describe it
24 sort of generally?

25 A. I mean, endogeneity bias in general is that there's a

2:15-cv-01045-RFB-PAL

1 correlation between the residual in the regression and one of
2 the independent variables on the right-hand side. In this
3 particular case, I think the problem is that there's a
4 correlation between the residual and the event revenue that
5 Dr. Topel includes on the right-hand side. And that
6 contaminates the whole regression. It makes the whole
7 regression unreliable.

8 Q. And so when you say the whole regression is unreliable, I
9 think that's clear; but just to be overly clear, as lawyers tend
10 to be, that means that the coefficient next to foreclosure
11 share, too, would be unreliable. Is that fair?

12 A. That's exactly -- exactly right.

13 THE COURT: Well, not just the coefficient. You're
14 talking about statistical significance of the alleged
15 independent variables, too, right, or not?

16 THE WITNESS: Yes. I mean, the whole -- every aspect,
17 the regression coefficients, the associated standard errors, it
18 all is, you know, contaminated and unreliable.

19 THE COURT: So it's not just going to bias one aspect
20 or one particular factor, it will bias the entire equation.

21 THE WITNESS: Yes. That's a very important principle,
22 when we teach endogeneity bias in econometrics, that the problem
23 is not just confined to the variable that's correlated with the
24 residual; it contaminates the whole regression.

25 BY MR. DAVIS:

2:15-cv-01045-RFB-PAL

1 Q. Now, you said that event revenues correlate with the
2 residual in Dr. Topel's regression or that you believe that
3 there's that correlation. Could you just spell out a little
4 bit, you know, in a slightly more detailed way why you believe
5 that's so.

6 A. Yes. So if we think about Dr. Topel's regression, on the
7 left-hand side we have wage level as his compensation of the
8 fighters. This is mostly set before -- almost entirely,
9 actually, it's set before the actual event. And it's reasonable
10 to think that the compensation is set based on the revenue that
11 is expected to be raised from the event.

12 But he doesn't have expected revenue. What he actually
13 has is actual realized revenue. And this is going to vary. On
14 average this might be very close similar to expected revenue,
15 but it's never going to be exactly the same. They're going to
16 be -- you don't know how many people are going to sign up for
17 Pay-Per-View on the night, for example.

18 And what this means is that there's a slippage between
19 the actual realized revenue and the expected revenue, and that
20 slippage goes into the residual. And as a matter of
21 construction, because in that residual we now have a bit of the
22 actual realized revenue, that inevitably is going to be
23 correlated with the actual realized event revenue, which is one
24 of the variables he includes in his regression.

25 Q. And I think you've already made clear what that means for

2:15-cv-01045-RFB-PAL

1 the reliability of Dr. Topel's regression. And I think you
2 addressed this, but should Dr. Topel have recognized the danger
3 of endogeneity bias in this way?

4 **A.** I mean, my opinion is that he should. But when he had such
5 a weak link between event revenue and compensation, that should
6 have set off an alarm bell in his mind that something was wrong,
7 and then he should have thought about that.

8 **Q.** Okay.

9 THE COURT: Could there have been other things that he
10 could have done as it relates to his regression analysis that
11 would have demonstrated that? So, in other words, if he thought
12 that was the case, could he have used other statistical methods
13 in the modelling to have addressed them that you think he could
14 have done that he didn't do?

15 THE WITNESS: I mean --

16 THE COURT: So if he wanted to find out if there was in
17 fact a relationship between event revenue and wage level, would
18 there be additional regression tests that he could have run, you
19 think he -- that he could have run, excuse me, that he didn't?

20 THE WITNESS: I mean, I think one of the big problems
21 actually when you've got endogeneity bias is that you don't
22 actually have a test of it. So --

23 THE COURT: You don't have? I'm sorry.

24 THE WITNESS: You don't have a test of it within the
25 data. You can't check. So when a -- when you run a regression

2:15-cv-01045-RFB-PAL

1 model, it produces an estimated residual and it forces that
2 estimated residual to be uncorrelated with your independent
3 variables, event revenue in this case.

4 THE COURT: Right.

5 THE WITNESS: And that's by -- that's just a feature of
6 regression analysis. So you can't test whether that estimated
7 residual is actually correlated.

8 Now, there are different methods that one can use to
9 try and overcome this endogeneity bias. I mean, Dr. Topel
10 didn't pursue any of those.

11 THE COURT: Such as?

12 THE WITNESS: Well, there's a method called
13 instrumental variables. I'm not quite sure if you want to get
14 into the details of that. But another method that you could use
15 is essentially what Dr. Singer did, which was to take event
16 revenue over to the left-hand side of the regression and use the
17 wage share. And then if there's a correlation of that, the
18 variable on the left-hand side with the residual, that does not
19 cause these problems of bias and unreliability in the
20 regression.

21 So I think one of the solutions is really the solution
22 that Dr. Singer used, which is to use a wage share regression.

23 THE COURT: Okay. Thank you.

24 BY MR. DAVIS:

25 Q. And would another solution to this endogeneity problem be to

2:15-cv-01045-RFB-PAL

1 simply eliminate event revenues from the regression entirely,
2 take it out of the right side, but not place it on the left side
3 either?

4 **A.** No, I think that would be wholly -- wholly inappropriate
5 because we know -- I mean, I said earlier that we have sports
6 that have more revenue, have higher compensation. So we sort of
7 know there's a link between revenue and compensation. And if
8 you just leave revenue out of the regression, you might not have
9 an endogeneity bias, but you have a different sort of bias,
10 what's known as omitted variable bias. You've left out the
11 variable that's highly relevant to this determination of
12 compensation.

13 Q. Okay. One more question, which is pretty technical in this
14 subject, and then we'll be done.

15 THE COURT: You have about three or four minutes left,
16 Mr. Davis.

17 MR. DAVIS: Three or four minutes left. Okay. I
18 think, then, this may be close to where we end.

19 THE COURT: Okay.

20 BY MR. DAVIS:

21 Q. So, this is a slide you created showing a simplified version
22 of Dr. Singer's regression. And here we have wage share as the
23 dependent variable, not wage level. And we no longer have event
24 revenue on the right-hand side as an independent variable.
25 Otherwise, they're very similar.

2:15-cv-01045-RFB-PAL

1 Now, one of the things that Zuffa has argued is that
2 because Dr. Singer, in some of his specifications of his
3 regression, uses revenue weighting on foreclosure share, that
4 his regression, at least those regressions, suffer from
5 endogeneity bias. Now, is that a fair criticism?

6 **A.** No. I mean, I think there are three reasons why that's not
7 a fair criticism. The first is that on the left-hand side here
8 he has event specific revenues. And when he does the weighting,
9 he's never using event specific revenues. He's using the annual
10 revenues of Zuffa as a whole and relative to other MMA promoters
11 in the market.

12 Secondly, when he sort of investigates whether this is
13 a problem, one of the things he does is he fixes the revenue
14 weights over time. So now they're completely fixed. So there
15 just cannot be a relationship with the event specific revenue on
16 the left-hand side. He finds the results are very similar.

17 And, thirdly, he looks at other measures of the
18 foreclosure share that don't use revenue weights. They used
19 ranked weights or unweighted. And, again, he finds that the
20 results are very similar.

21 So I think all of that points to the conclusion that
22 this is not a serious problem.

23 MR. ISAACSON: And for the record, Your Honor, I have
24 to object to all of that because none of that endorsement of
25 Dr. Singer's regression or analysis of it was in his reports.

2:15-cv-01045-RFB-PAL

1 THE COURT: He does endorse Dr. Singer's reports.

2 MR. ISAACSON: Not --

3 THE COURT: Are you saying in this particular
4 explanation that he just provided?

5 MR. ISAACSON: Yes, yes.

6 THE COURT: Okay. I'll go back and -- take that under
7 advisement. I'll go back and look at that. Thank you,
8 Mr. Isaacson.

9 MR. DAVIS: I would also point out that this particular
10 criticism exists in none of Zuffa's expert reports. This came
11 up for the first time at the hearing, this particular argument,
12 this general claim about endogeneity. So we are responding in
13 kind only.

14 THE COURT: Okay.

15 MR. DAVIS: And I think with that, I will -- I'm
16 complete -- I've completed my direct examination of
17 Professor Manning.

18 Professor Manning, you should, I think, remain there.

19 THE WITNESS: Yeah. No, I just wanted to get myself
20 some water.

21 MR. DAVIS: Thank you very much, Your Honor.

22 THE COURT: Go ahead, Mr. Isaacson.

23 MR. ISAACSON: Good morning, Your Honor.

24 Good morning, Professor.

25 Can we look at paragraph 6 of your report, footnote 7.

2:15-cv-01045-RFB-PAL

1 CROSS-EXAMINATION OF ALAN MANNING

2 BY MR. ISAACSON:

3 Q. All right. Now, you outlined the three criterion. We won't
4 go through those again. With respect to the third criterion,
5 your conclusion is that's satisfied if a firm's revenue, such as
6 event revenue in MMA, is proportional to the marginal revenue
7 product of a worker or group of workers, for example, the
8 fighters or group of fighters in MMA.

9 That's how that third criterion is satisfied.

10 A. Can I just remind myself of what exactly I wrote in the
11 context in that paragraph?

12 I think what I would say about that is that I think
13 that's sufficient, as I said earlier in my testimony today, but
14 it's not a necessary condition. So I thought it was satisfied
15 in this particular case, and so that supported it; but it's not
16 that if this wasn't satisfied you couldn't use wage share.

17 Q. Okay. And the -- and you concluded that -- if I can call
18 that proportionality, for shorthand.

19 A. Okay.

20 Q. You concluded that proportionality was plausible in this
21 case. If we can look at paragraph 24 of your report, the last
22 sentence.

23 A. Yes.

24 Q. All right. You conclude that the marginal revenue product
25 of an MMA fighter is plausibly proportional to event revenue,

2:15-cv-01045-RFB-PAL

1 correct?

2 **A.** Correct.

3 Q. And you cite your authorities for that in your report,
4 correct?

5 **A.** I'm sorry. I can't ...

6 Q. Any authorities you had for that you laid out in your
7 report, correct?

8 **A.** I would not say I laid out the totality of support for that.
9 That would be an extremely long list, because I think this is
10 very well attested. I laid out enough that I thought made --
11 made the case.

12 Q. So you certainly laid out the most important factors that
13 made the case?

14 **A.** I laid out factors that I thought were sufficient to make
15 the case.

16 Q. All right.

17 **A.** I mean, I'm not saying that there aren't -- are not other
18 ones that one could have made.

19 Q. All right. And the -- and that's a conclusion -- this
20 plausibility conclusion is something that you state several
21 times in your report, right? Paragraph 30.

22 **A.** Let me have a look.

23 Yes, I used the word "plausibly" there.

24 Q. Right. And in fact, in your conclusion, you also say it's
25 reasonable.

2:15-cv-01045-RFB-PAL

1 **A.** Yes.

2 Q. All right. Now, in this case, you believe that the
3 statement that fighter marginal revenue product is proportional
4 to event revenue. That's a plausible and reasonable
5 hypothetical.

6 **A.** I mean, I think it's well supported by the evidence. I
7 mean, in my testimony earlier I went through the four pieces --
8 you know, distinct threads of evidence that I think supported
9 that proportionality. I can -- I mean, if I can repeat them,
10 they would be firstly that thinking about the economic
11 principles, which is that, you know, if you double the amount of
12 people watching the event, you double the revenues, you double
13 the marginal product, that's proportionality. There's a lot of
14 attestation, support for the use of this in the sports economic
15 literature. That Dr. Blair's testimony, you know, really
16 essentially endorsed proportionality. That the results of
17 Dr. Singer's regressions were very plausible. That also lend
18 support to proportionality. And when we talked about
19 hypothetical company documents, if there were such a document,
20 that would also support proportionality.

21 So I think there is a very large amount of evidence to
22 support that hypothesis of proportionality.

23 Q. And so look -- so for under -- based on what you just said,
24 if event revenues double, then fighter MRP doubles, right?

25 **A.** Yes. I mean, on average that is going to -- going to be the

2:15-cv-01045-RFB-PAL

1 case.

2 Q. So paragraph 27 of your report, you say just that. Now when
3 you wrote that, you considered that to be a hypothetical, right?

4 A. I -- I'm sorry. I don't quite understand what you mean
5 by --

6 Q. What I'm getting at here is that today you've said there's
7 evidence.

8 A. Yeah.

9 Q. But in your report you reach the conclusion that
10 proportionality was plausible, and you described it and you
11 considered it to be a hypothetical, a plausible hypothetical.

12 A. No, I don't think that is fair at all. I mean, I think that
13 the first of my, you know, bits of evidence that I said support
14 proportionality was a sort of hypothetical think about what
15 happens if twice as many people pay for an event. That is a
16 hypothetical.

17 But when we went to the other pieces of evidence, when
18 we're talking about the use in the sports economic literature,
19 when we're talking about the sensible Dr. Singer regression,
20 when we're talking about, you know, the fact that perhaps
21 companies themselves assume proportionality, this is not just
22 hypotheticals. These are actual pieces of evidence.

23 Q. Well, when I asked you about this at your deposition -- let
24 me -- let me -- if we can go to your deposition.

25 And do you have your deposition there?

2:15-cv-01045-RFB-PAL

1 **A.** I do, yes.

2 Q. Page 93, line 14. And I'm discussing proportionality in
3 paragraph 27 of your report that we were just looking at. And I
4 ask you: "Is that a hypothetical" -- referring you to paragraph
5 27. "Is a hypothetical you're discussing. Is that correct?"

6 And you say you haven't worked with the data in this
7 case. "I mean, so it's hypothetical, but I think, you know,
8 it's a very plausible, reasonable hypothetical."

9 Okay. Before today, what you -- when you've talked
10 about plausibility in the report, you were considering this to
11 be a plausible, reasonable hypothetical.

12 **A.** No, I don't -- I don't think that's fair. I mean, I think
13 if you look at my prior answer to that, I would say that there
14 I'm talking about -- and, perhaps, I can read it out. Is the
15 first sentence in paragraph 27 is, you know, inviting them to
16 think about a hypothetical situation in which event revenue
17 doubles.

18 So that is what I just said a minute ago, that first
19 thinking about the economic principles behind proportionality.
20 That is a hypothetical, but the other elements that I talked
21 about to support proportionality, those are not hypotheticals.

22 Q. Well, let's move -- I mean, you want the first -- the full
23 context there. Let's move up earlier on the page. I ask you:
24 "Do you have an opinion" -- at line 4: "Do you have an opinion
25 as to whether the marginal revenue product of inputs to events

2:15-cv-01045-RFB-PAL

1 other than the athlete is proportional to event revenue" --

2 **A.** Sorry. I'm not entirely sure what page we're on now.

3 **Q.** Oh, same page there, page 94.

4 **A.** Oh, 94 now. So we've gone over to -- because we were on 93
5 I thought.

6 **Q.** Oh. Oh. I'm sorry. You're right.

7 THE COURT: I'm sorry, Mr. Isaacson. Which -- you have
8 something on the screen. I'm not sure if that's what you're
9 talking about.

10 MR. ISAACSON: Right. No, I mixed up my pages there.
11 That was my fault.

12 THE COURT: That's all right.

13 BY MR. ISAACSON:

14 **Q.** All right. Well, let me move on. I'll come back.

15 I do want to ask you, then. And as of the time of your
16 report, you considered proportionality to be an assumption of
17 Dr. Singer, right?

18 **A.** When he estimates a wage share regression, that is -- yes,
19 that is imposing proportionality on the data. But, you know, if
20 we ask ourselves is that a plausible -- a reasonable thing to
21 do, the answer is yes for the four or five reasons that I've
22 given so far today.

23 **Q.** All right. I just -- I think we're getting on the same page
24 here. All right.

25 His regression is imposing proportionality on the data,

2:15-cv-01045-RFB-PAL

1 correct?

2 **A.** I mean, it is imposing proportionality, but it implies that
3 if revenue, for example, doubles, other things equal,
4 particularly the challenged conduct, compensation will double.

5 **Q.** Right. And you consider that a reasonable and plausible
6 thing to do.

7 **A.** I consider it -- yes. I mean, I'm not quite sure what the
8 words "reasonable" and "plausible" mean in a technical sense. I
9 think it's the right thing to do in this case. Let me just put
10 it that way.

11 **Q.** And there was --

12 THE COURT: Why is that?

13 THE WITNESS: Well, that's the --

14 THE COURT: The four factors you talked about.

15 THE WITNESS: -- factors I talked about earlier today.

16 BY MR. ISAACSON:

17 **Q.** But there was nothing in your report that shows that event
18 revenue is proportional to marginal revenue product, correct?

19 **A.** I referred to, you know, for example, this hypothetical and
20 these other things, but I'm not doing empirical tests in my
21 report. That's not been part of my opinion.

22 THE COURT: How would you test for that? If you were
23 going to test for it.

24 THE WITNESS: Well, I think ideally what you would like
25 to do is to find -- if you could find, for example, a source of

2:15-cv-01045-RFB-PAL

1 variation in event revenue, expected event revenue, that didn't
2 suffer from the problem that I thought the measure used in this
3 case, and then you would look to see whether there's
4 proportionality in that case.

5 But I do think it's highly relevant that when you sort
6 of look across different sports with very different levels of
7 revenue, you see -- if they've got similar sort of degree of
8 competition, you see a similar level of the wage share, which
9 implies that the wage differences are in proportion to the
10 revenue differences.

11 THE COURT: And isn't one of the challenges, at least
12 in this case it seems to me to be, that you don't have good data
13 on what a competitive absolute wage level would be for a
14 similarly situated fighter. And is that part of the challenge I
15 think you talked about as relates to the data here, which is
16 that in another analyses you might actually have a wage level
17 where there's not alleged monopsonistic power, and then you
18 could use that potentially to do some analysis.

19 And isn't the challenge here that you don't seem to
20 have, or at least there's not an agreed-upon sort of competitive
21 wage level that can be used in the analysis here?

22 THE WITNESS: Yes. I mean, I think that's it --
23 exactly it. We observe actual compensation, but we don't really
24 observe what compensation would have been in the absence of the
25 challenged conduct. So I think what we're trying to do -- so

2:15-cv-01045-RFB-PAL

1 what, for example, Dr. Singer is trying to do here is to take,
2 you know, take -- construct a measure of how much monopsony
3 power that Zuffa has, which is his foreclosure share. And then
4 see whether the wage -- when the foreclosure share is higher, so
5 if Zuffa has more monopsony power, whether the wage share is
6 lower. And he confirms that that's the case.

7 But, you know, the ranges of the foreclosure share
8 observed in the data, I don't think one would want to -- I would
9 want to say that any of them represent a perfectly competitive
10 market. They're just different degrees of monopsony.

11 THE COURT: Okay. Thank you.

12 BY MR. ISAACSON:

13 Q. All right. And in order to show that event revenue is
14 proportional to marginal revenue product, you would need to do
15 empirical work with the data, correct?

16 THE COURT: Well, but how would you -- I don't
17 understand how you would do that if you don't have the actual
18 wage -- which is my question to him, Mr. Isaacson, which is
19 how -- how could any of the experts do that in this case if they
20 don't have a competitive wage level in which to be able to
21 determine the accurate proportionality or not of the event
22 revenue to the wage level. I'm not sure I'm understanding what
23 you're saying would be tested.

24 MR. ISAACSON: I don't think that that is necessary for
25 proportionality.

2:15-cv-01045-RFB-PAL

1 THE COURT: Okay. So maybe I'm misunderstanding you,
2 then.

3 MR. ISAACSON: Right. I'm now just talking about the
4 proportionality of the contribution of the fighters to event
5 revenues. And -- which is his -- which is what he says in
6 footnote 7, which does not -- doesn't go to competitive
7 wage/noncompetitive wage.

8 THE COURT: So when you're talking about -- I'm sorry,
9 maybe I misunderstood you.

10 MR. ISAACSON: So what he has said -- and so now we are
11 talking about whether that's been proven in this case.

12 THE COURT: Whether what's been proven? Because --

13 MR. ISAACSON: Whether proportionality.

14 THE COURT: Okay. Proportionality of what to what?
15 Again, I just want to make sure we're talking about --

16 MR. ISAACSON: Just -- footnote 7, so we just get it
17 exactly right.

18 Event revenue in MMA is proportional to the marginal
19 revenue product of a worker or group of workers in MMA. That's
20 the proportionality that I'm talking about.

21 THE COURT: Right. And at least I understood
22 Professor Manning's testimony to be that -- that this
23 proportionality he believes is appropriate because of the nature
24 of the industry and what you see in other sports in relation to
25 the marginal revenue product of the workers in sports.

2:15-cv-01045-RFB-PAL

1 That's what I thought you were saying. Is that right?

2 THE WITNESS: Yes. And I think there's more evidence
3 than that, actually, but that's certainly an important part of
4 it.

5 THE COURT: So this -- that was one of the four reasons
6 why you thought this was appropriate.

7 MR. ISAACSON: And I would like a test what he's
8 saying, was my question.

9 THE COURT: Okay. Okay. We're on the same page. I
10 just wanted to make sure we're talking about -- okay. Go ahead.

11 MR. ISAACSON: All right.

12 BY MR. ISAACSON:

13 Q. In order to show that event revenue is proportional to
14 marginal revenue product, you would have to do empirical work
15 with the data, correct?

16 **A.** No, I don't agree with that. I mean, we've just given the
17 example in which looking at other sports which are judged to be
18 comparable in something, that's relevant information. Looking
19 at an internal company document that projected increases in
20 revenue and increases in compensation in proportion, that would
21 be relevant to it.

22 Q. Let me ask you --

23 **A.** It's not just -- I mean, obviously, it adds something to it,
24 but it's not just this.

25 Q. So if I can ask you to look at your deposition, page 84,

2:15-cv-01045-RFB-PAL

1 line 18.

2 So I ask you: "Is there anything in your report that
3 shows that event revenue is proportional to marginal revenue
4 product?"

5 And you answer: "I mean, I haven't worked with the
6 data, so, I mean, that would require working with the data."

7 And I want to ask you to look at page 90, line --

8 THE COURT: So, I'm sorry, what did you mean by that,
9 then?

10 THE WITNESS: Can I just take -- sorry -- take a moment
11 to understand a bit what the lead and then context was for that?

12 THE COURT: Sure.

13 MR. ISAACSON: And he gives the identical answer again.
14 I'd like him to see both, if that's possible, to save time. If
15 we could look at page 90, line 24, through 91, line 13.

16 BY MR. ISAACSON:

17 Q. "Have you done any work in this case -- have you done any
18 work reflected in your report that shows that in order for event
19 revenue to double, the marginal revenue product of athletes has
20 to double?"

21 You say: "I mean, I haven't studied, you know, the
22 data, the particular situations, so I haven't got an opinion on
23 that."

24 **A.** Well, I think that I would go back to saying that look --
25 working with the data in this case is part of it. But I think

2:15-cv-01045-RFB-PAL

1 that, for example, the material in Dr. Zimbalist's report
2 looking at those other sports is highly relevant. So to the
3 extent that I -- you know, I didn't -- I failed to list that
4 there, I think that I would say that I misspoke in that.

5 Q. Well, you told me that you didn't have an opinion on this
6 issue in the absence of working for data -- absence of working
7 with the data, correct?

8 A. No, I expressed the view in my report that I think that
9 proportionality is a reasonable assumption in this case.

10 Q. Yes, a reasonable assumption. Let me ask you to look at
11 your deposition at page 60, lines 10 through 18.

12 I ask you: "And is it your opinion that the record in
13 this case -- I ask you about the record in this case -- makes it
14 possible to ascribe a measurable part of a firm's revenue to the
15 activities of a particular worker?"

16 Answer: "I have -- I mean, I've not been asked to
17 express an opinion about that. I've not given thought to that,
18 so I don't have an opinion on that."

19 Right. Prior to today, you have not expressed any
20 opinions or done the work necessary to express any opinions
21 about whether that proportionality assumption has been met.
22 Aren't I right about that?

23 A. No, I think you're wrong. I mean, I think if I look at the
24 question that you're asking there, you're asking about whether
25 it's possible to ascribe a measure -- measurable -- sorry,

2:15-cv-01045-RFB-PAL

1 Your Honor -- whether it's possible to ascribe a measurable part
2 of a firm's revenue to the activities of a particular worker.

3 And I think in trying to answer that question I was saying -- I
4 was paying attention to that word "particular," in that case,
5 when we're often talking about the, you know, the collective of
6 the workers here.

7 Q. All right. I asked you the same question about groups.
8 Let's look at paragraph -- line -- page 62, line 22.

9 A. Sorry, 62?

10 Q. Beginning at line 22.

11 A. Yeah.

12 Q. I have this habit of saying right or all right before I ask
13 a question.

14 So as part of your report, you did not do any work to
15 allow you to conclude that a measurable part of a firm's revenue
16 can be attributed to any group of UFC fighters. Is that
17 correct?

18 A. I mean, I did not do --

19 Q. Okay. Let's just --

20 THE COURT: Okay. Let him -- let him explain the quote
21 so I can understand the context.

22 Go ahead, Professor Manning.

23 THE WITNESS: Yeah. So wait a minute. Let me just
24 sort of --

25 BY MR. ISAACSON:

2:15-cv-01045-RFB-PAL

1 Q. Please read through line 21 where you conclude you did
2 not -- where I asked you: "You did not try to measure the
3 amount of that connection. Is that correct?"

4 "I have not worked with the data in that case."

5 You also tell me you're repeating what you said
6 earlier --

7 THE COURT: Hold on. Hold on. Mr. Isaacson, hold on a
8 second. So let me just clarify something.

9 Professor Manning, were you asked to do any statistical
10 analysis in this case?

11 THE WITNESS: No, I was not.

12 THE COURT: And so, perhaps, you could help me
13 understand when you're saying you didn't work with the data,
14 what does that mean in the context of the answers to these
15 questions?

16 THE WITNESS: I mean, what I would say is that if you
17 look at my answer above that, say at line 18, I'm referring
18 to -- I mean, Dr. Singer is the one who's done the work with the
19 particular --

20 MR. ISAACSON: I apologize for interrupting. What
21 page --

22 THE COURT: Well, wait, Mr. --

23 MR. ISAACSON: I just want to know what page he's on.

24 THE WITNESS: The same page, 62.

25 MR. ISAACSON: 62. Thank you. I apologize for

2:15-cv-01045-RFB-PAL

1 interrupting.

2 THE COURT: No, no, that's all right. I'm trying to
3 track both of you, so it's hard for me to do that. That's a
4 good clarification.

5 THE WITNESS: Okay. So, you know, there I say,
6 starting line 18, if -- sorry, let me read this out.

7 "If one takes Dr. Singer's approach, he's seeing how
8 variation in the foreclosure effect affects the worker's share,
9 all things being equal."

10 So what I'm doing is affirming the support -- affirming
11 my support for the work that Dr. Singer has done, but I myself
12 has not -- have not done that work in this particular case.

13 BY MR. ISAACSON:

14 Q. And up until now -- up until today you -- because you had
15 not been able to work with any of the data, you had not
16 expressed an opinion about whether individual fighters or a
17 group of fighters ... whether you can -- whether you could tie
18 to an individual or group of fighters a measurable part of the
19 firm's revenues.

20 And I may not have said that great, but I think you
21 understand what I'm getting at.

22 THE COURT: I'm sorry. Was this produced before or
23 after his report? I mean, was this -- was this deposition taken
24 before or after his --

25 MR. ISAACSON: After his report.

2:15-cv-01045-RFB-PAL

1 THE COURT: Because I thought the report says that. So
2 are you talking other than the report?

3 Because in his report he talks about how specifically
4 he thinks that there's something unique about MMA and sports
5 such that a particular fighter can actually have an impact on
6 the event. So I'm not sure if you're talking about something
7 apart from what he puts in the report, Mr. Isaacson.

8 MR. ISAACSON: I'm talking about what's in his report.
9 The deposition takes place after the report. I'm going to get
10 to the only thing he cites to in his report to support what
11 you're talking about, Your Honor.

12 THE COURT: Okay. All right. So --

13 MR. ISAACSON: Okay.

14 THE COURT: -- because I just remember that from the
15 report. So you're going to get to that part --

16 MR. ISAACSON: I think it's quite -- it's quite clear
17 that in his report he uses a plausibility standard or a
18 reasonability standard.

19 THE COURT: Well, that's your view. I have to decide
20 that, but okay.

21 MR. ISAACSON: I understand that. But since he wrote
22 it several times, I don't think I'm overstepping in saying that.
23 I spent time on his deposition with that, and he says doesn't
24 have an opinion about whether those things have been proven
25 because -- and he wasn't asked to have that opinion and to have

2:15-cv-01045-RFB-PAL

1 that opinion he would have to -- he would have to look at the
2 data and work with the data.

3 THE COURT: Okay. So if you want to ask about that,
4 that's fine.

5 MR. ISAACSON: Okay. Well, let's go -- let's look at
6 this proof.

7 THE COURT: Here's one thing I want to do. When you
8 say proof in the context of being an econometrician or
9 statistician, what does that mean to you? Because certainly in
10 the context of the law, it has a very different potential
11 meaning. So what would you need to have as a finding in order
12 for you to be able to say something has been proven or clearly
13 demonstrated?

14 THE WITNESS: Uhm. I think if we're looking at a
15 regression analysis, one would be looking for, you know,
16 statistical significance of the coefficient on the variable of
17 interest. In this case it's foreclosure share.

18 But I do think it's important that, you know, when I
19 use the word "reasonable" and "plausible" in expressing myself,
20 I'm not a lawyer. And if those terms have a particular meaning,
21 I'm not aware of what those are.

22 THE COURT: Well, that's why I'm asking you a question
23 about what -- what you meant, and that's what I think
24 Mr. Isaacson's questions are about, which are fair questions.
25 Which is, what do you mean when you say plausible? Is that

2:15-cv-01045-RFB-PAL

1 saying that you have some doubt about whether or not there's a
2 connection or not? Or is that simply your way of saying that
3 you think that there's a strong relationship, but you're not
4 going to say that it's absolute?

5 So it's hard for us -- as lawyers, it has particular
6 meaning, but you're not a lawyer. So what does it mean to you
7 when you use the word "plausible" and "reasonable" in this
8 context?

9 THE WITNESS: I think it's -- in this particular case,
10 as a social scientist, I think I would be very reluctant to say
11 that any question is settled beyond, you know, any doubt
12 whatsoever. So in that sense, I think that, you know, you have
13 to always be open. You know, you're trying to use all the
14 information that you've got, and I've described different sorts
15 of information here that I was using, as best -- best you can.

16 In this case, I think it all adds up to a very strong
17 case. I think there may be an element in here that when I use
18 the word "plausible" and "reasonable," there's a little bit of
19 British understatement in there. We're sort or not -- we tend
20 not to sort of lay it on a little bit thick. So I would just
21 ask, perhaps, to bear that in mind.

22 THE COURT: Okay. Go ahead, Mr. Isaacson.

23 BY MR. ISAACSON:

24 Q. But stepping back from -- you know, I did spend time on this
25 question at the deposition. At your deposition, you do agree

2:15-cv-01045-RFB-PAL

1 with me that you told me that you had no opinion about how much
2 revenue could be ascribed to fighters, either individually or a
3 group, and that in order to have that opinion, you would have to
4 work with the data.

5 **A.** No, I mean I think that what I would say is that in this
6 case, for example, working out what the impact of the challenged
7 conduct is on the fighters, it's Dr. Singer who's help dealt
8 with that bit of the case. That has not been part of my
9 assignment. It has not been part of my opinion.

10 **Q.** But with respect to that part of the case, Dr. Singer's
11 regression, as you agreed, imposes proportionality. The -- with
12 respect to proving proportionality, whether there is a
13 relationship between the efforts of an individual fighter or a
14 group of fighters that's proportional to event revenue, whether
15 there's what you call that tight link, you did not have an
16 opinion about whether that was true or not at your deposition,
17 and you said you would -- in order to have that opinion, you
18 would have to work with the data.

19 I have that correct, don't I?

20 **A.** No, I don't think that's fair at all. For example, we've
21 been talking earlier about one of the elements that I've talked
22 about today, which is this hypothetical or thinking about if you
23 double revenue, what happens to the marginal revenue product,
24 and that the marginal revenue product would double. And that,
25 you know, we've been talking about it earlier today, and that is

2:15-cv-01045-RFB-PAL

1 very clearly in the record in my deposition.

2 Q. Yes. It's a hypothetical.

3 A. That part of it is. As I mentioned the other bits, the
4 comparisons with other -- the use in other sports, you know,
5 parts of sports economics.

6 Q. Well, the comparison to other sports in your report -- can
7 we look -- you do one comparison, right? That's your
8 footnote 28.

9 A. Let me have a look. Sorry, what page is that on?

10 Q. Let's see. Paragraph 27, note 28. So that would be
11 paragraph -- yes, page 6.

12 A. No, I don't think that that's fair. For example, one of
13 the -- if we looked at one of the materials that I relied on in
14 this -- excuse me while I just get this ...

15 THE COURT: Sure, take your time.

16 THE WITNESS: I think it's the last one. Yes, it
17 should be. I -- one of the pieces of the academic literature
18 that I relied on was this survey by William Boal and Michael
19 Ransom in 1997 called Monopsony in the Labor Market. And that
20 summarizes a lot of literature from the sports economics. And
21 in my report, when I refer to that article, I say -- I refer to
22 the fact that they are using many articles from sports
23 economics. I mean, perhaps, it would take me a little bit of
24 time to find exactly the paragraph where I -- where I do that.
25 BY MR. ISAACSON:

2:15-cv-01045-RFB-PAL

1 Q. All right. So you would agree with --

2 A. I mean, I --

3 (Court reporter clarification.)

4 BY MR. ISAACSON:

5 Q. I'm sorry. Are you finished?

6 A. I'm sorry. I'm saying I'm sure I can find that. I can't
7 put my finger on it right this minute.

8 Q. You're trying to find what?

9 A. Where I refer to the Boal and Ransom paper and the fact that
10 it has extensive references to papers from sports economics in
11 the context of monopsony.

12 Q. All right. And the --

13 MR. DAVIS: If I may, if you might look at paragraph 16
14 of your report on page 3.

15 BY MR. ISAACSON:

16 Q. All right. And you would agree with me with respect to just
17 that footnote separate from the Boal and Ransom piece, that all
18 you're pointing to there is a boxing event with Floyd -- with
19 Floyd Mayweather and Conor McGregor.

20 A. I mean, that footnote refers to that, but that is not -- it
21 is not my view that the only part of the sports economics
22 literature or what's happening in professional sports, that it's
23 only that fight that is relevant to this case.

24 Q. All right. And you would agree with me that article does
25 not demonstrate proportionality.

2:15-cv-01045-RFB-PAL

1 **A.** I -- excuse me while I just sort of look at the -- remind
2 myself the context in which I was writing that footnote.

3 I mean, I think I'm making -- the point there is simply
4 that I'm saying the identity of the fighters matters --

5 Q. Yes.

6 **A.** -- to how much revenue it generates, and then there'll be a
7 link to the compensation of the workers. It follows from that.

8 Q. And do you not cite the Boal and Ransom survey in
9 paragraph 16 as showing proportionality, correct?

10 **A.** I'm citing the Boal and Ransom paper partly because it's a
11 survey that summarizes a lot of papers on monopsony to that
12 date. That's not part of -- for example, I didn't -- when I was
13 laying out my arguments earlier in my testimony about why
14 there's proportionality, I did not refer to Boal and Ransom.

15 Q. Right. You're not aware of Boal and Ransom supporting a
16 proportionality assumption, correct?

17 **A.** Well, Boal and Ransom is a survey of what had been done on
18 monopsony, a lot of it in professional sports to that point. So
19 it's more of a survey paper than expressing a particular
20 opinion.

21 Q. All right. If we could look at your slide 11.

22 All right. And with regards to wage level, the WL, I
23 believe you said that that would be based -- the wage level for
24 an event would be based on expected revenues for the event.

25 THE COURT: So, Mr. Isaacson, actually, this may be a

2:15-cv-01045-RFB-PAL

1 good time, because I think you're going to go into a series of
2 questions here --

3 MR. ISAACSON: Yes.

4 THE COURT: -- and I want to be able to make sure I get
5 them all at once. So why don't we take our break now. We're
6 going to come back at 12:45 to complete -- you have, I think,
7 another 15 or 20 minutes or so that I can give you,
8 Mr. Isaacson, then we'll go to Professor Oyer, and then we'll
9 come back briefly to Professor Manning. But we'll be in recess
10 until that time, and then you can continue right where you left
11 off.

12 MR. ISAACSON: Thank you, Your Honor.

13 THE COURT: All right. Thank you.

14 (Recess taken at 10:20 a.m.)

15 (Resumed at 1:28 p.m.)

16 THE COURT: Please be seated. All right. We're back
17 on the record. Sorry about the delay. I was held up.

18 Professor Manning, you recognize that you're still
19 under oath?

20 THE WITNESS: I do.

21 THE COURT: All right. Mr. Isaacson.

22 MR. ISAACSON: Slide 11, Matt.

23 THE COURT: Your equation?

24 MR. ISAACSON: Matt, on the screen.

25 THE COURT: Oh, no, it's warming up.

2:15-cv-01045-RFB-PAL

1 MR. ISAACSON: I see.

2 COURTROOM ADMINISTRATOR: Its warming up, I'm sorry.

3 MR. ISAACSON: I see.

4 THE COURT: It's not quite as fast as you are.

5 MR. ISAACSON: Well, it's on the TV screen.

6 THE COURT: Right. Yes. That takes a little longer to
7 warm up.

8 COURT ADMINISTRATOR: Oh, that's me.

9 THE COURT: If you want to go ahead and start
10 questioning, you can.

11 MR. ISAACSON: As long as you both have it on your TV
12 screen.

13 BY MR. ISAACSON:

14 Q. So the wage level, I think you said, the wages are based on
15 the expected revenues.

16 **A.** I think it's reasonable to think that one of the influences
17 on the wage level is the revenues that are expected to be
18 generated by the event. It's not the only factor.

19 Q. Right. It would be common for firms to take into account
20 expected revenues when setting wage levels.

21 **A.** I'm only expressing an opinion about what would happen in
22 this particular case where we have fighters who are the key
23 workers in a particular event where we know that they're -- you
24 know, that they're responsible for this bit of revenue.

25 Q. But you don't think other firms look at their revenues when

2:15-cv-01045-RFB-PAL

1 they decide what wage levels to set?

2 **A.** They may do. Some may do. I haven't expressly looked at
3 lots of other firms in this particular case. I haven't, you
4 know, expressed a view. Some may, some may not.

5 **Q.** Right. And as part of your work as an economist, you
6 haven't looked at whether firms set wage levels based on
7 expected revenues.

8 **A.** It's not the case that they -- firms in the models that I
9 would use would be setting wages to maximize their profits. It
10 would be wrong to say that the expected revenues are the drivers
11 of wages. It would be -- it might be the case that the expected
12 revenues ended up related to wages, but that is not the same as
13 saying that there was -- his influence in the choice of wage.

14 **Q.** All right. And what evidence is there in your report that
15 wage levels for Zuffa are more than -- are something more than
16 influenced by revenues, that there's something more going on?
17 What evidence is in your report about that?

18 **A.** Well, I think in the -- in my report, I'm talking about the
19 case where we're talking about the hypothetical, thinking about
20 doubling revenue. But as I've talked about earlier this
21 morning, there's a huge raft of other evidence that is relevant
22 to this. It's what the sports economists are using in talking
23 about these internal company documents, which are assuming a
24 proportionality --

25 (Interruption by the court reporter.)

2:15-cv-01045-RFB-PAL

1 THE WITNESS: I can't remember the exact next word that
2 came next, actually.

3 BY MR. ISAACSON:

4 Q. And the only sports economist article referenced in your
5 report is the Boal and Ransom article that you mentioned in your
6 earlier testimony, right?

7 A. The Boal and Ransom article is not a sports economics
8 article. It's a survey of articles on monopsony at that point
9 of what's a considerable number in sports. So that cites quite
10 a large number of sports economics articles, and I just referred
11 to that as a way of summarizing what is quite a large literature
12 without going through everyone individually.

13 Q. Okay. I'll come back to the Boal and Ransom.

14 But just to summarize, that because -- oh, I'm sorry.
15 The residual here, you say, will reflect in the regression or
16 will reflect the difference between the actual and the expected
17 revenues?

18 A. I think it's very likely to, yes.

19 Q. Right. And so because fighters contribute to event
20 revenues, that as a result, if you include event revenues on the
21 right side of the regression, you have an endogeneity problem,
22 and if you don't, you have an omitted variable problem. And,
23 therefore, you can't use actual compensation. Is that right?

24 A. Well, I think that this form of the regression is -- it
25 leads to unreliable conclusions. I mean, I'm not sure I have

2:15-cv-01045-RFB-PAL

1 quite summarized that if you can't use compensation --

2 Q. It would be unreliable -- so long as the fighters are
3 contributing to event revenues, it's going to be unreliable --
4 regression using actual compensation as the dependent variable
5 is going to be unreliable because you're either going to face an
6 endogeneity problem by incorporating the revenues or an omitted
7 variable problem by leaving them out.

8 A. In this particular example in this case, this labor market
9 we're studying compensation events, we're studying revenues and
10 events, yes.

11 Q. Because the fighters contribute to event revenues.

12 A. Yes, I believe that they do.

13 Q. The -- in High Tech workers, now -- which you've cited and
14 indicated you had done work on. All right. They're the model
15 that was offered to the Court to -- both for injury and damages
16 and to support the class, used actual compensation as the
17 dependent variable. We agree on that, correct?

18 A. In the regression that Leamer ran in that -- that case was
19 one with log of compensation on the left-hand side, yes.

20 Q. Right. And on the right-hand side it used firm revenue.

21 A. It used, as I recall, one measure of firm revenue. I think
22 it was global firm revenue per employee. I'd have to actually
23 check whether that's the case.

24 Q. I believe you're correct. It was global firm -- it used
25 global firm revenue per employee. So there were two classes in

2:15-cv-01045-RFB-PAL

1 that case. One was all salaried employees and one was a subset
2 of technical workers. You remember that?

3 **A.** I -- I don't remember exactly, I'm afraid, but I, you know,
4 I think -- I'm prepared to believe you, if you're saying that
5 that is the case.

6 **Q.** And that's Exhibit ZZX279, which we can put into the record,
7 the -- which is the Leamer report. I won't -- you're getting it
8 right, so I'm not going to take you to the pages.

9 **A.** Okay.

10 **Q.** So in that case, okay, Dr. Leamer had available firm revenue
11 and could have run the regression using compensation as a share
12 of revenue. Could have done that both for -- for the salaried
13 employees and for the subset of technical employees.

14 **A.** Well, it would be -- my view is that it would have been
15 inappropriate in this case -- in that case while it is
16 appropriate in this case. And there are two reasons.

17 THE COURT: And why -- go ahead.

18 THE WITNESS: So the first reason is that in this
19 particular case, we think that the fighters, as I think has been
20 said, are the product. People are interested in the identity of
21 the fighters. As we talked about earlier in the case of the
22 products being produced by these high-tech firms, people are not
23 really interested in the specific identity of the software
24 engineers who produced it. They're interested in the product
25 that comes out at the end. So that's the first reason.

2:15-cv-01045-RFB-PAL

1 The second reason is that we -- you cannot, in that
2 data set, link the work of particular workers, say in either of
3 these classes, to a particular part of the revenue stream of
4 those companies. This was global company revenue per employee.
5 I'm not even sure all of salaried work employees excludes
6 nonsalaried employees. I must admit my recollection was that it
7 was just workers in the United States. I mean, I stand ready to
8 be corrected on that.

9 But I then draw your attention to global, the point
10 being global revenue. And so there's nothing in that case
11 that's like the equivalent. We have an event, a discrete flow
12 of revenue for a particular piece of work, and we know exactly
13 which workers were associated with that. There's nothing like
14 that.

15 BY MR. ISAACSON:

16 Q. Am I incorrect, the percentage of revenues for fighter share
17 in this case uses the global revenues of Zuffa?

18 A. The event revenues? The specific event revenue?

19 Q. Right.

20 A. I mean, I -- to be quite honest, I can't recall exactly how
21 they do that. But if it did, that is particularly fine. The
22 point is the work -- the fighters are being done -- is being
23 done, and I think it's restricted to those events in North
24 America, actually, even if the rights are being sold globally.

25 Q. Yes.

2:15-cv-01045-RFB-PAL

1 **A.** So I think that isn't a fair analogy at all.

2 **Q.** Is it your testimony that the technical workers of those
3 companies, such as Apple, Google, et cetera, do not contribute
4 significantly to their firm revenues by creating better products
5 and services, and that what you actually have to know is you
6 have to know their identities?

7 **A.** No. I mean, I believe they contribute to the firm. I don't
8 think the firm would have employed them unless they were making
9 some contribution. But I don't think their particular identity
10 is critical to the work that they're doing in that. And that's
11 different from this case, very different.

12 **Q.** You're saying you have -- in order for workers or
13 contractors to contribute significantly to the revenues of a
14 firm or an event or to do it proportionally, you have to know
15 their names?

16 **A.** No, that is not what I am saying.

17 THE COURT: Mr. Isaacson, that's not what he's saying.
18 What he's saying is that in the particular industry, at least in
19 his view, that the knowledge of who the particular fighter is
20 contributes to the value of the product versus a person not
21 buying an iPhone because they care about which particular
22 technician built that particular iPhone. That's what I
23 understand the testimony to be.

24 Is that right, Professor Manning?

25 THE WITNESS: That's exactly right.

2:15-cv-01045-RFB-PAL

1 BY MR. ISAACSON:

2 Q. All right. And ...

3 You're saying that in order for there to be
4 proportionality, that the consumer has to care about which
5 particular technician built a particular iPhone as opposed to
6 understanding whether those technicians made important and
7 serious contributions to the quality of that product?

8 **A.** I'm sorry. I think you're mixing up the point about
9 proportionality with a different point now. I mean, the point
10 is about can you ascribe a particular revenue stream to a
11 particular group of workers whose identity was critical to that
12 revenue stream. That is not about proportionality.

13 Q. You are saying that in order to ascribe a particular revenue
14 stream to a particular group of workers, you need to know their
15 identity?

16 **A.** No, that's not --

17 Q. I'm sorry, the consumer needs to know their identity.

18 **A.** No, that's not what I'm saying -- saying at all. I mean, if
19 you imagine a hypothetical situation in which we manage to work
20 out this particular engineer and exactly the revenue that came
21 from the work that they did, we would expect there to be a link
22 between the compensation they are paid and the revenue they are
23 generating. It's more a problem that we cannot -- the nature of
24 the data is that we are unable to do that. And so we have to,
25 in a high-tech case, take a different approach to try and to

2:15-cv-01045-RFB-PAL

1 establish damages, for example.

2 THE COURT: So you're saying you can't, in that
3 context, disaggregate the marginal revenue product of the group
4 of workers versus one particular worker?

5 THE WITNESS: Yes, it's exactly that. Software
6 engineers, you know, it's really quite unusual to have a piece
7 of work which is like an event. You know exactly which workers
8 were part of generating that revenue. You know exactly which
9 group of fighters were not part of that event. That's really
10 quite an unusual sort of situation to have, but we have it in
11 this situation.

12 And I think it's very important to choose the
13 techniques that are appropriate to the data that you are having
14 in hand. I mean, I think that's what being an expert --
15 expressing an expert opinion actually -- actually is.

16 BY MR. ISAACSON:

17 Q. All right. The Boal and Ransom article, which is PCCX685,
18 that article does not discuss wage share, correct?

19 A. I can't recall that exactly. And I would have to -- I would
20 have to ...

21 MR. DAVIS: Your Honor, may I approach the witness with
22 the article?

23 THE WITNESS: Yeah, that would be very --

24 THE COURT: Sure.

25 MR. ISAACSON: I was about to hand him copies, but

2:15-cv-01045-RFB-PAL

1 sure.

2 And would Your Honor like a copy? We're going to put
3 it on the screen. Hand a copy to the Court?

4 THE COURT: No, that's all right. That's fine. If you
5 just put it on the screen, that's fine.

6 BY MR. ISAACSON:

7 Q. Okay. Now, the section discussing -- with the survey that
8 you discussed, would be found at page 15, Section 5.1, Direct
9 Measurement of Wage and MRP. Okay? This continues for a couple
10 of pages. Do you generally recall that this is the section of
11 the article that you were discussing? You can see the
12 discussion of baseball occurs on the next page.

13 A. I mean, what they are -- the paper is doing, then, is --

14 Q. I have a very specific question. Just is this the section
15 of the article that you were referring to?

16 A. I'm afraid without reading the whole article -- I mean,
17 obviously, they do refer to sports there. Without referring to
18 the whole article, I don't feel I can quite express an opinion
19 about this as the only place.

20 Q. All right. I haven't seen it elsewhere, so I'll plow
21 forward.

22 Now, the -- you are unaware -- this article -- and this
23 section is entitled Direct Measurement of Wage and MRP. What
24 this section is discussing is literature where people like
25 Scully attempted to measure MRP and compared it to actual wages.

2:15-cv-01045-RFB-PAL

1 There's no -- it's not a discussion of what we've been calling
2 wage share, correct?

3 **A.** Uhm. Well, some of those papers -- I mean, again, I would
4 come back to this point that it depends a lot upon the, you
5 know, the data -- the appropriate technique depends a lot on the
6 data that you have available to you. So let's just take a
7 particular example of that Scully 1974 paper.

8 **Q.** I'm actually just trying to ask you a question about this
9 article and what it -- and is it discussing the comparison
10 between wages and MRP as opposed to between -- without any
11 discussion of wage share.

12 **MR. DAVIS:** Your Honor, I would -- I would ask that
13 counsel allow the witness to finish answering the question.

14 **THE COURT:** Well, I think, Mr. Isaacson, it might be
15 better to -- so you don't invite a long answer, to break the
16 question up. Because I think what you're trying to do is ask
17 about whether or not the article, one, talks about wage share
18 and where it talks about it and then, two, what is it using as a
19 measurement as it relates to MRP. So I think if you separate
20 those things out, that might make it easier. Because I think
21 you're asking two things in that same question.

22 **BY MR. ISAACSON:**

23 **Q.** All right. The -- this section is talk -- 5.1 is talking
24 about comparing -- literature that compares wages and MRP,
25 correct?

2:15-cv-01045-RFB-PAL

1 **A.** Yes. It's discussing a methodology -- one methodology for
2 getting at monopsony power.

3 **Q.** And at the top -- yes. And at the top of page 16, it says
4 that wage -- or, rather, total compensation must be measured
5 accurately in levels. Right. It's talking about comparisons to
6 studies using actual wages, correct?

7 **A.** I think that quote is being misinterpreted there, actually.
8 My -- can I give my understanding of what that means?

9 **Q.** Well, I'll ask you about the Scully, then.

10 THE COURT: Well, let him answer it. Because if you
11 ask him about a quote, then he should be able to answer that.

12 So go ahead, Professor Manning.

13 THE WITNESS: So the methodology -- so there are
14 different methodologies that have been used to try to assess the
15 extent of monopsony power. They're discussing one here that
16 started with that Scully 1974 article. And what he's saying
17 here -- and that attempted to directly estimate the marginal
18 revenue product, and to directly estimate -- and then have
19 measure of the wage, and then to compare the two. And what
20 they're saying there is that the sort of wage data you should
21 have has to be the actual compensation; not an index. A wage
22 index would be something that says in 2000 it was 100, in
23 2015 -- so it has to be the actual level. That's the point
24 they're making there.

25 I mean, the analogy to what Singer is doing is, when

2:15-cv-01045-RFB-PAL

1 he's constructing the wage share, he is using actual total
2 compensation measured accurately in levels and not a wage index.
3 So what Dr. Singer is doing is exactly in line with what I think
4 the point is being made here.

5 BY MR. ISAACSON:

6 Q. All right. So moving back --

7 THE COURT: Mr. Isaacson, about five minutes left.

8 MR. ISAACSON: Yes, that's why I'm trying to get
9 briefer questions and answers here.

10 BY MR. ISAACSON:

11 Q. So just moving down two paragraphs, it says: "Almost all of
12 the studies examined professional baseball." Right. And
13 then -- so here we're discussing sports articles. And then it
14 says in the next paragraph: "The most influential paper on the
15 topic's by Scully 1974. Almost everyone who has published on
16 the topic has adopted some version of his approach. Scully
17 tests monopsony by estimating the MRP of individual players and
18 comparing it to pay."

19 Now, Scully actually used a regression with the log of
20 compensation as the dependent variable, correct?

21 **A.** He had to -- he had a regression like that, yes.

22 Q. All right. Now, going onto --

23 THE COURT: So how did he estimate the MRP?

24 THE WITNESS: So he used this -- I mean, I -- so how he
25 did it there, he had data on, basically, it's revenue of

2:15-cv-01045-RFB-PAL

1 baseball teams in two seasons in the late 1960s.

2 THE COURT: Right.

3 THE WITNESS: He has total revenue. I'm not quite sure
4 where that came from. He regresses that on the number of wins,
5 and then he had a separate equation to regress the number of
6 wins on -- now, these are things I'm not going to understand
7 very well, like, runs batted in and, you know, those baseball
8 statistics. Don't ask me please too many questions about that.

9 But I think what's very important again is -- I come
10 back to the point is that the nature of the data available, it
11 takes in large part the approach you take. So when he goes to
12 his -- his revenue equation is for what I assume are all the
13 teams in Major League Baseball. But when he comes to the wage
14 data, the source of that wage data is from newspaper articles
15 about what some workers actually earn. And across the two
16 seasons, he only has, I think, something under 150 observations
17 on wages. And there are many more than 150 players in baseball.

18 So he does not have the data available to him in order
19 to keep -- calculate the wage share at the level of the term --
20 at the level of the team. And so of course he can't take this
21 approach. He tries to find a different approach to try and do
22 the best he can with the data that he's got available.

23 So that's why I would say, yes, I understand why what
24 he's doing is he's not using the wage share, but again it comes
25 back to this point about what is the nature of the data, what is

2:15-cv-01045-RFB-PAL

1 the nature of the work that is being studied.

2 BY MR. ISAACSON:

3 Q. All right. And then on page 17, on the left-hand side,
4 moving down, there's: "Scully's model is easy to criticize."
5 There's a paragraph discussing how the premise that spectators
6 are willing to pay only to see performance that contributes to
7 winning by the home team is tenuous. And that paragraph
8 concludes: "A direct measure of how individual performance
9 contributes to revenues is needed."

10 Is that conclusion that a direct measure of how
11 individual performance contributes to revenue is needed, is that
12 something you agree with?

13 A. No, it is not. And I think, actually, if one takes the --
14 this paper is written -- survey paper is written in 1997. If,
15 for example, you look at the article written by Scully in 2004,
16 you see that, you know, the start of his -- that paper presents
17 sort of wage shares by major league sports in different years
18 and, you know, is not based on any individual performance data.

19 So, no, I think there is -- you know, people are taking
20 different approaches to try and to get to these problems
21 according to, you know, the data that they have available,
22 which, you know, is different in different circumstances.

23 Q. And so the article notes that Scully's talking about
24 baseball, but at, again, on page 17, now on the right-hand
25 column, there's a discussion about the NFL and an article that

2:15-cv-01045-RFB-PAL

1 looks at the MRP of football players on the offensive side. And
2 it explains at the end of that paragraph: "They found the
3 offensive units of teams in the National Football League were
4 paid significantly more than MRP, even though football players
5 do not have free agencies. They suggest that Scully's concept
6 of MRP is inappropriate."

7 And Scully's work was not holding up in other sports,
8 was it?

9 **A.** I think that's a very broad conclusion to -- to draw. I
10 mean, without going into the particular details of this study,
11 it's a slightly strange conclusion to draw that firms are going
12 to be paying workers more than their marginal revenue product,
13 because that would mean they're making losses on those -- on
14 those workers.

15 **Q.** That's --

16 **A.** I mean, there may well be something, if I read that paper in
17 detail, that I would actually say that the problem is not with
18 Scully, but with this particular paper. But I'm -- I haven't
19 read that paper in detail and I can't comment on that.

20 **Q.** And that's the point the authors were making, when you take
21 Scully and apply it to football, the results don't make any
22 sense.

23 **A.** I mean, I think there's a whole literature that came out of
24 Scully 1974, very innovative paper and so on, but it's not the
25 final word on the topic. It was the first word. And then

2:15-cv-01045-RFB-PAL

1 there's a to and fro between academics as there is about what's
2 good about it, what's bad about it, and people expressing their
3 own view and so on. I mean, that's just part of the sort of
4 academic give and -- you know, give and take that you get.

5 Q. So this survey -- and, again, this is the only article that
6 you reference in your report. That's why I'm spending time with
7 it. It says then on the same page: "Scully's" -- at the last
8 paragraph: "Scully's econometrics specifications have also been
9 criticized. Small changes in the model result in large
10 differences in estimated MRP."

11 Was that statement correct, that small changes in the
12 model result in large differences in the estimated MRP?

13 A. I think it's fair to say that there was some papers out
14 there that claim that. But one's also got to remember that this
15 survey article is now 20 years -- 20 years old. There's quite a
16 lot of other articles written in sports economics about this
17 sort of being --

18 Q. I'm not discussing those with you, sir, because they're not
19 in your report.

20 THE COURT: Yes, but you've opened the door to asking
21 him about it. So you cannot --

22 MR. ISAACSON: No, I'm not --

23 THE COURT: Mr. Isaacson, I actually get to decide
24 that. If you ask him to place the articles in context, you
25 can't ask him to ignore what he knows in terms of expertise. If

2:15-cv-01045-RFB-PAL

1 you want to ask him about that, that's fine, but you can't then
2 have him disregard what he's saying, which is -- you know, I
3 expect Professor Oyer will say the same thing about how the
4 literatures have changed or evolved. So we don't want to be
5 stuck in time at the time of this particular article. So if you
6 ask him about it and the significance of it, it's from 1974,
7 this Scully, and then later. So he has to be allowed to be able
8 to respond, so --

9 MR. ISAACSON: I respectfully disagree, Your Honor,
10 under the disclosure rules for expert reports. Because when he
11 cites a -- when he cites an article in his report and I
12 cross-examine him about it, and then he responds, Well, there
13 are other articles that aren't in my report, I think he's gone
14 beyond the report and that's not --

15 THE COURT: No, what you're doing is you're asking him
16 to comment on conclusions in a report and apply them to a modern
17 context. If you ask him to do that and he's an expert, he can
18 then use his expertise. I don't disagree with you that if he
19 wants to rely specifically on things in his report, then they
20 can't be beyond that. But if you ask him a question about an
21 article and then ask him to opine based upon his expertise, then
22 he's allowed to use that expertise to answer.

23 So, he's going to be allowed to answer that. So let's
24 move on from there.

25 MR. ISAACSON: Okay.

2:15-cv-01045-RFB-PAL

1 BY MR. ISAACSON:

2 Q. One last -- one last point here in the article. On page 18,
3 in the second full paragraph, just with respect to what's
4 explained in this article, sir, this -- just with respect to
5 what's in this survey, it notes that there was an attempt to
6 apply these methods to nonunion coal towns, which are considered
7 to be monopsony towns. And the results of those studies were
8 widely varying MRP estimates, which in some cases were sharply
9 less than actual wages.

10 When you -- when the methods were -- according to this
11 article, when the methods were applied to these coal towns that
12 were used by Scully for baseball, they didn't hold up. Am I
13 reading that correctly?

14 THE COURT: So, I'm sorry, Mr. Isaacson, so I
15 understand your question. When you say "the method," which
16 method are you referring to?

17 MR. ISAACSON: The strategy of directly comparing MRP
18 and wages.

19 THE COURT: Okay.

20 THE WITNESS: I mean, I think there's -- let me sort of
21 back up a little bit. I mean, I think there would be widespread
22 agreement that if you could compare wages with marginal revenue
23 product, that would be informative about the extent of monopsony
24 power. The problem is that you can't -- can never observe
25 marginal revenue product directly -- or never is a very strong

2:15-cv-01045-RFB-PAL

1 word, but almost never. And so people are trying to find a
2 proxy, a way to estimate it.

3 And, you know, there isn't a perfect method to it, and
4 this academic literature is evolving with people saying, try
5 this approach, try that approach, and this seems to work here,
6 it doesn't seem to work there, perhaps labor -- baseball and
7 Appalachian coal mining towns are rather different in some
8 respect that isn't captured by this. There are lots of reasons.
9 I mean, this survey paper is trying for its readers to outline
10 what they think are the live issues at that point that, perhaps,
11 future researchers should be -- current researchers should be
12 aware of and, perhaps, future researchers should get involved in
13 trying to sort out.

14 BY MR. ISAACSON:

15 Q. And just so I understand it --

16 THE COURT: All right, Mr. Isaacson.

17 MR. ISAACSON: It's my last question.

18 THE COURT: All right. I'll give you a little extra
19 time. Yes, go ahead. This is your last question.

20 BY MR. ISAACSON:

21 Q. Just so I understand you, it's your view that you can almost
22 never observe marginal revenue product directly.

23 **A.** I mean, I think it's commonly understood in the whole of
24 labor economics that marginal revenue product is very difficult
25 to observe. I believe in his testimony, Dr. Topel gave a joke

2:15-cv-01045-RFB-PAL

1 which was exactly about that where someone said, Well, we're
2 going to sort out this problem by assuming we have observed the
3 marginal revenue product. But this is -- that problem of
4 finding a proxy for it under -- is a problem that afflict the
5 whole of labor economics, and it's not a problem that makes the
6 whole of labor economics worthless as a field, in my opinion.

7 THE COURT: Thank you, Professor Manning.

8 Okay. So, Professor Oyer, is that going to be you,
9 Mr. Isaacson?

10 MR. ISAACSON: No.

11 THE COURT: Okay.

12 MR. ISAACSON: Ms. Grigsby.

13 THE COURT: So if we have Professor Oyer come on up.

14 MS. GRIGSBY: Your Honor, can we have a two-minute
15 break before Professor Oyer testifies?

16 THE COURT: A two-minute break. That's so specific.

17 MS. GRIGSBY: Three?

18 THE COURT: Yes, Ms. Grigsby. Yes, that's fine.

19 (Recess taken at 1:57 p.m.)

20 (Resumed at 2:01 p.m.)

21 COURTROOM ADMINISTRATOR: Please remain standing and
22 raise your right hand.

23 PAUL OYER, having duly been sworn, was examined and
24 testified as follows:

25 COURTROOM ADMINISTRATOR: Thank you. Sir, please state

2:15-cv-01045-RFB-PAL

1 and spell your name for the record.

2 THE WITNESS: My name is Paul Oyer, P-A-U-L, last name
3 is O-Y-E-R.

4 COURTROOM ADMINISTRATOR: Thank you.

5 THE COURT: Go ahead, Ms. Grigsby.

6 DIRECT EXAMINATION OF PAUL OYER

7 BY MS. GRIGSBY:

8 Q. Good afternoon, Professor Oyer.

9 A. Good afternoon.

10 Q. So you sat here during Professor Manning's testimony, right?

11 A. Yes, I did.

12 Q. And you heard Professor Manning testify about his three-part
13 test, which he believes makes it appropriate to use wage share
14 in this case. Is that correct?

15 A. Yes.

16 Q. And as part of that three-part test --

17 MS. GRIGSBY: Can we have slide 13.

18 BY MS. GRIGSBY:

19 Q. -- he needs these three conditions to be met, with the last
20 being what we've been calling proportionality. Is that right?

21 A. Just to be fair to him, he would argue that these are -- he
22 doesn't need these to be met, but he would argue that if they're
23 met, his test holds. And so, yes -- more or less, yes.

24 Q. Well, he focused in this case on the three-part test,
25 correct?

2:15-cv-01045-RFB-PAL

1 **A.** I agree.

2 **Q.** And we know he didn't run any other tests to determine --

3 **A.** Correct.

4 **Q.** -- the use of wage share. All right.

5 Now, here with respect to specifically to the third
6 part of the test, which is proportionality, has proportionality
7 been demonstrated here, in your opinion?

8 **A.** No. I found both the report, as well as Singer's reports,
9 as well as the discussion this morning, a little bit troubling
10 because of the -- Professor Manning is indicating that he --
11 that the three -- the third -- that these -- his three-part test
12 holds here. And let's look at that footnote in particular, the
13 third criterion, we'll call -- we won't revisit this because
14 you've been through it all morning. We'll just call this the
15 proportionality condition.

16 And throughout this entire exercise there's been
17 literally no evidence offered that that proportionality
18 assumption holds.

19 **THE COURT:** So let me ask you a question because I
20 think it turns a little bit on this issue of whether or not
21 fighters contribute to event revenue. Do you believe that the
22 studies and the analysis here show that a particular fighter's
23 individual marginal revenue product will contribute to a
24 particular event revenue level?

25 **THE WITNESS:** So, yes, I -- of course I believe that.

2:15-cv-01045-RFB-PAL

1 However --

2 THE COURT: Okay.

3 THE WITNESS: -- the proportionality assumption is a
4 much -- the proportionality condition is a much stronger
5 statement than what you made.

6 THE COURT: Okay. So tell me -- so tell me about that.
7 Because if you were to -- and this is the part, I guess, that
8 we're going back and forth on. If you were to assume in a
9 perfect market that a fighter was paid for their marginal
10 revenue product --

11 THE WITNESS: Right.

12 THE COURT: -- and the marginal revenue product was --
13 was related to the event revenue, why would that not be
14 sufficient to satisfy the proportionality factor? Which I think
15 is the argument here, which is that if you have that
16 relationship, there is some correlation between event revenue
17 and marginal revenue product of the individual fighter.
18 Therefore, you have some basis for assuming that there's some
19 level of proportionality. Why do you disagree with that?

20 THE WITNESS: Okay. So wait a minute. I think
21 that's -- let me make a very important distinction based on your
22 question.

23 THE COURT: Okay.

24 THE WITNESS: Which is a good one. Nobody is doubting
25 that there's some level of relationship between these, but

2:15-cv-01045-RFB-PAL

1 proportionality is a very strong statement. It says that if
2 event revenue goes up by 20 percent, I expect fighter pay to go
3 up by 20 percent. There's no reason to accept that on its face.
4 There's no reason to believe that would be true.

5 It's been stated by Professor Manning, both in his
6 report and here this morning, that it's plausible. Now, I don't
7 know -- I know there's some legal side of plausible.

8 THE COURT: Right.

9 THE WITNESS: And I think Professor Manning and I are
10 both going to plead the "we mean this in the way we would talk
11 about it in a seminar type of world."

12 THE COURT: Right.

13 THE WITNESS: But plausible, you know, is -- I don't --
14 there's just no evidence to back it up. He literally offered
15 you this morning no evidence to back it up. The one piece of
16 evidence he offered was, he said: The foreclosure share
17 estimates in Professor Singer's regressions were sensible to him
18 and, therefore, the proportionality assumption holds. That's
19 just -- that's a leap with 17 steps in the middle, each of which
20 I would love to take issue with because none of them are true.

21 MS. GRIGSBY: Can we turn to --

22 THE COURT: Hold on just a moment, Ms. Grigsby.

23 So what I understand you to be distinguishing between,
24 Professor Oyer, is, on the one hand, you're not disagreeing that
25 there is a relationship to the marginal revenue product of a

2:15-cv-01045-RFB-PAL

1 particular fighter and event revenue and the fact that if a
2 particular fighter has a greater marginal revenue product, that
3 would increase, to some degree, the event revenue. You're not
4 disagreeing with that as a -- in terms of how it applies in this
5 case?

6 THE WITNESS: I would say they're certainly likely to
7 be related. We're using cause and -- I want to be a little
8 less --

9 THE COURT: They're correlated.

10 THE WITNESS: -- about the relation -- which way that
11 relationship runs, but of course they're going to be related.

12 THE COURT: And it seems to me what you're taking issue
13 with is the notion of, for lack of a better phrase, direct
14 proportionality, that that -- that if you have a very specific
15 proportional increase in event revenue, that is going to
16 directly be mirrored and -- or should be mirrored and -- in an
17 increase on either the wage share or wage compensation. And
18 you're saying you disagree with that?

19 THE WITNESS: I'm saying I see no evidence that that
20 holds. I also -- can I add one thing from what you said?

21 THE COURT: Sure.

22 THE WITNESS: And that is, you sort of said we're
23 trying to draw distinction -- you suggested in that last remark
24 that there's some distinction between direct proportionality and
25 proportionality. Everything we've been talking about is just

2:15-cv-01045-RFB-PAL

1 flat-out proportionality. It's footnote 7 of Manning's report.
2 It's the one-for-one increase. It's if my MRP increases by
3 20 percent event revenue -- or if event revenue increases by
4 20 percent, the MRP -- that's indicative that the MRP is also
5 20 percent higher. That is a very, very strong assumption.

6 And if you were in an academic seminar and you said I
7 have a model, I'm going to, you know, run a regression, which
8 Dr. Singer does, which takes that as a given, and then the
9 evidence you offered for it was the evidence that Dr. Manning
10 offered this morning and in his report and that Dr. Singer --
11 you'd be laugh -- you'd literally be laughed out of the room.
12 There's no -- there's just nothing to back up this assumption
13 which is so fundamental to what they're doing.

14 Now, in fairness, he said it's a necessary condition,
15 not a sufficient one, but he did tell us he believes it holds.
16 And Singer is assuming it holds in the way he runs his
17 regressions, and there's just literally nothing to back that up.

18 BY MS. GRIGSBY:

19 Q. So let's talk about what you said, which is that there's
20 nothing to back that up.

21 MS. GRIGSBY: Can we go to slide 15.

22 BY MS. GRIGSBY:

23 Q. So you heard Professor Manning say that Dr. Singer's
24 regression produces a credible and sensible result, right, and
25 that there is some known relationship between revenue and MRP.

2:15-cv-01045-RFB-PAL

1 He also said that. And you just said you would agree that there
2 was probably some relationship between revenue and MRP, correct?

3 MR. DAVIS: For the record, Your Honor, I do object
4 that this is a brand new analysis, not located anywhere in
5 Dr. Oyer's report.

6 THE COURT: Overruled. Let's see where it goes. I
7 mean, if it's essentially an extrapolation of Professor Oyer's
8 report, which I think that it is, in his view, I don't know that
9 it's going to be prejudicial. I'll allow it.

10 Go ahead, Ms. Grigsby.

11 BY MS. GRIGSBY:

12 Q. So he said that -- and so you both agree that, you know,
13 revenue and MRP, there may be some relationship. So let's look
14 at what Dr. Singer did. Based on what Dr. Singer did, do you
15 have any basis to believe that Dr. Manning's -- Professor
16 Manning's assumption that athlete -- that wage share is somehow
17 proportional to what athlete's MRP is is a correct assumption?

18 A. Right. So let me point you to this example, and it is only
19 an example, but I will tell you that having seen the data, it's
20 not an outlier or some cherry-picked example. This is a fairly
21 representative situation.

22 We have a fighter named John Howard. I've never heard
23 of John Howard. I don't know much about this, but I'm going to
24 assume -- I'm going to presume the following: That is, that in
25 2015 during -- he had these two fights only a few months apart.

2:15-cv-01045-RFB-PAL

1 I'm going to guess that the marginal product of labor for him
2 was roughly equal in those two fights. Again, that's a guess,
3 but it seems like I'm -- it seems like a very reasonable guess,
4 much more reasonable than some of the guesses that have been
5 made earlier today.

6 And so given that, let's take a look at what happened.
7 He's in two different fights. How did his compensation vary
8 across those two fights? Well, it's actually 50 percent
9 different. And the entire reason for that is he won one fight
10 and lost the other. We'll come back to that. Hold that point
11 because it's very important.

12 But if we now look at -- so my guess is his marginal
13 product of labor is pretty -- there's -- an economist typically,
14 before Dr. Singer wrote his report, would have said, That's our
15 first guess as to his marginal product of labor. If the labor
16 market is somewhat competitive, that's his compensation.

17 Now, the alternative way to approach this, apparently,
18 is to divide that by the event revenue. Well, these are two
19 fights, same year, same guy. I would guess -- I'd have to look
20 it up to be sure. I would guess given that the event revenue is
21 much smaller in the first one that he was higher up in the card
22 in the first one and low down in the second one because the
23 event was a much bigger event with bigger names or something
24 like that. Well, they both have Conor McGregor, so ...

25 But the point is, if you look at this, the MRP is

2:15-cv-01045-RFB-PAL

1 probably about the same in both of these fights. His
2 compensation is about the same in both these fights except
3 because he won he gets more in one of them than the other. His
4 fighter compensation share goes down by a factor of four. The
5 event revenue is six times higher.

6 He's -- his marginal product of labor was not six times
7 higher in the second fight than it was in the first. So the
8 proportionality assumption that's being thrown out suggests that
9 event revenue went up by six times, therefore, John Howard's
10 marginal product of labor was six times higher in the second
11 fight.

12 I mean, I'm not an expert on UFC, but that seems
13 ridiculous.

14 THE COURT: So let me ask you a question, though. Did
15 you do this type of analysis across the data? Because one of
16 the concerns I have is, you're not saying you cherry-picked, but
17 this is out of thousands of data points.

18 THE WITNESS: I mean, I'll give you one more.

19 THE COURT: No, no, but my point is --

20 (Court reporter admonishment.)

21 THE COURT: Did you do any systemic analysis that makes
22 this point as it relates to Dr. Singer's or Dr. Topel's
23 statistical analysis?

24 THE WITNESS: So I did not.

25 THE COURT: Okay.

2:15-cv-01045-RFB-PAL

1 THE WITNESS: I --

2 THE COURT: And I know that that wasn't what you were
3 asked to do.

4 THE WITNESS: I did this in response to
5 Dr. Manning's -- don't forget that when I wrote my report, I had
6 not seen Dr. Manning's claims on proportionality.

7 THE COURT: Right.

8 THE WITNESS: So I asked for this analysis in response
9 to that. And I have not done a formal analysis to show you
10 exactly -- I can show you one more example. I have about 10
11 more that we -- that I've created that they are -- that suggest
12 this is a representative phenomena. Event revenues just swing
13 all over the place.

14 THE COURT: So, but what I'm saying to you is that how
15 do you know it's a representative phenomena if you didn't
16 actually do the statistical analysis yourself? I mean, because
17 in some ways the same argument you're making regarding
18 Professor Manning could be made a little bit about you. And I'm
19 trying to avoid with both you any -- trying to draw any
20 inferences based upon data analysis because neither one of you,
21 I think, were asked to specifically do that. Although, you both
22 I think try to use examples to help me understand when wage
23 level compensation is important versus wage share. So that's
24 why I ask you that.

25 THE WITNESS: I don't think Dr. Manning showed you any

2:15-cv-01045-RFB-PAL

1 examples that reflected at all on this. So, the fact -- I would
2 draw the distinction between this and anything he presented
3 because at least I've given you a few data points, and I can
4 give you one more if you'd like.

5 But I will absolutely agree with you that this is -- I
6 have not done a formal analysis. I believe, based on the
7 analysis I have done in the past, that this is representative of
8 the data.

9 THE COURT: So when you -- what you --

10 THE WITNESS: -- the data enough to tell you that I
11 can -- I -- that I believe this would prove representative of
12 the data.

13 THE COURT: So what you want to understand is that
14 these data points illustrate the point you're making sort of
15 theoretically about -- or specifically about the model and the
16 assumptions?

17 THE WITNESS: I'm -- I agree with that. Can I take
18 issue with one thing you said?

19 THE COURT: Yes.

20 THE WITNESS: I'm not demonstrating anything
21 theoretically.

22 THE COURT: Okay.

23 THE WITNESS: Professor Manning gave you a very nice
24 theoretical discussion in his report of why Dr. Singer's
25 regression might be sensible. You know, he gave you a

2:15-cv-01045-RFB-PAL

1 theoretical justification after the fact. He's a theorist. I'm
2 not. I'm an empiricist. This and everything else I've done is
3 going to be about the data.

4 THE COURT: Okay.

5 BY MS. GRIGSBY:

6 Q. So I just wanted to, then, talk about what you did do. Did
7 you run any econometric analysis for this case?

8 A. Yeah. Would you mind giving me a slide that has my Table 1
9 and Dr. Singer's Table 6 in it?

10 MS. GRIGSBY: 8.

11 THE WITNESS: I don't remember the number of that
12 slide.

13 MS. GRIGSBY: Yeah, 8.

14 THE WITNESS: So but while it's coming up, let me just
15 quickly explain, you may remember this from the reports so I'll
16 be very brief. I just took Dr. Singer's baseline regression,
17 which you can see now in Table 6, and I reran the exact same
18 regression. And all I did was change the dependent variable
19 from fighter share to log of compensation. Why did I do that?
20 Because that's the first thing every labor economist does when
21 running a regression. They put the log of compensation on the
22 left-hand side and they see what's going on.

23 THE COURT: So one of the issues that comes up in this
24 case for me, Professor Oyer, is if there is true monopsony power
25 such that the actual wage level itself is still below what it

2:15-cv-01045-RFB-PAL

1 would be competitively, how does that not impact using, right,
2 right, the log of wages? Because in that context, from what I
3 understand, is that you actually have other wages that are not
4 influenced by monopsony power that you can use. And so one of
5 the challenges that I have to look at in this case is -- as
6 relates to using actual wage level is that appears to
7 potentially, at least as argued by the plaintiffs, to have been
8 influenced by the monopsony power. So how can I take that into
9 consideration when looking at this analysis?

10 THE WITNESS: Okay. So can I give you two answers to
11 that -- to that question?

12 One is you can do what labor economists have done since
13 time and memorial to do that. We can take some -- we can take
14 the log of compensation, and this includes in it, if foreclosure
15 share is specified correctly -- I am not going to advocate for
16 or against Dr. Singer's foreclosure share measure. I'm going to
17 take it as given. I didn't study that. But let's just assume
18 that that's a measure of monopsony power.

19 THE COURT: Right.

20 THE WITNESS: So how would every economist before
21 Dr. Singer have analyzed that? They would look at the wage and
22 they would look at these foreclosure shares. And they'd say,
23 Okay, sure, I see that wage is going up -- I see that fighter
24 pay is going up, and I'm -- I have reason to believe monopsony
25 power is getting stronger at the same time. So what do I do

2:15-cv-01045-RFB-PAL

1 about that?

2 Well, I ran a regression where I have the wage going up
3 as the left-hand side variable and I have this measure of
4 monopsony power. And then I have a bunch of control variables,
5 such as Dr. Singer has or I had such as year effects, log of
6 revenue. We'll come back to that. You've heard a lot about
7 that. We're not done with it, I'm afraid.

8 And so I would put in all of these controls. And so as
9 a result, in my regression I have what economists would have
10 said until Dr. Singer wrote his report -- and, by the way, what
11 they will say in the future as well -- that the right way to do
12 this is I ran the wage regression and that gives me the but-for
13 world for what would the person's pay have been.

14 Can I --

15 THE COURT: How do you know that if you don't know what
16 the actual wage would be? So, in other words, if -- if I
17 know -- if I'm assuming that the wage that I'm using is
18 influenced by monopsony power, even if I can see that that wage
19 in and of itself varies with the foreclosure share, how would I
20 know what the wage would be, which is what I'm trying to figure
21 out, in the but-for world? Because what you're saying to me is
22 you can figure that out without actually knowing what the
23 wage -- actual wage would be in a competitive market?

24 THE WITNESS: Well, if I know -- what I do, then, is I
25 take the foreclosure share, set it equal to zero, back out.

2:15-cv-01045-RFB-PAL

1 That's my counterfactual wage that I would have in the
2 absence -- in the but-for world in the absence of competition.
3 It's literally what everybody's ever done before.

4 Can I have slide 6? I said it was a two-part answer.
5 Do you mind?

6 THE COURT: Okay. Sure. No, no, of course.

7 THE WITNESS: Slide 5. My mistake.

8 This is the textbook model of monopsony. It comes from
9 a book written by Alan Manning, and it's laid out as the basic
10 model of monopsony. And it gets to exactly your question.

11 So the wage in a monopsony world is the W there, and
12 the but-for wage that I want to know is, if I drew a line across
13 from the intersection of the supply in the MRP curve to the
14 wage, that would be the but-for wage in the absence.

15 THE COURT: Right.

16 THE WITNESS: And that's what I'm measuring. But
17 why -- how do I do it? I do it -- this graph clearly tells me.
18 What do I do? I look at the wage where the log -- we usually
19 use the log of wage for reasons we could go into if you wanted.
20 But that's the way the textbook's written. We just do it with
21 wage. Wage share was something that was dreamed up by
22 Dr. Singer. There's just no basis for it.

23 THE COURT: So but why, then, and when I looked at some
24 of the information I had received, is there not some
25 consideration as relates to sports -- there's discussions about

2:15-cv-01045-RFB-PAL

1 sporting revenue, wage revenue. I mean, this is a part of the
2 information that's been shared. That there's negotiations
3 around that. That there's even discussion by the team owners
4 that talk about event revenue and sort of in proportion of wages
5 to the revenue.

6 So why would I not, in the context of this particular
7 industry, look at that? Because to me that's -- this is a
8 general model, but you're talking about, at least from what I've
9 heard from all witnesses, this is a somewhat unique industry.

10 THE WITNESS: Well, I guess I would turn that question
11 around. I have not heard one compelling argument why you would
12 do that. And I'm going to tell you why you shouldn't. But I
13 think the baseline question is: Why don't I do what the
14 textbook tells me? Why don't I do what's been done in every
15 wage regression of monopsony power ever before? Literally.

16 And so -- and there are sports examples and there are
17 articles that discuss the wage share in those articles, but they
18 never -- they never run a regression the way Singer did, never.
19 Literally never.

20 THE COURT: But --

21 THE WITNESS: Scully is the closest, and he does it the
22 way I would do it, with a wage regression.

23 THE COURT: So how do you deal with this issue,
24 Professor Oyer, of different individuals in the same market
25 having different marginal revenue product, right, that -- that

2:15-cv-01045-RFB-PAL

1 you can't say that Conor McGregor doesn't have a different
2 marginal revenue product from some other lower ranked fighter?
3 And so why is it that when there's this discussion about what
4 should be appropriate compensation for him, that there's not a
5 discussion of event revenue in the context of this conversation?
6 That's -- that's what I have to sort of think about in this
7 particular case.

8 THE WITNESS: I'm sorry, I have three answers to your
9 questions this time.

10 THE COURT: That's helpful.

11 THE WITNESS: The first one is let's not talk about
12 Conor McGregor. Conor McGregor is an outlier. So do you want
13 to talk about Conor McGregor having -- that we can say that the
14 share of the revenue that night is directly related to Conor
15 McGregor? Of course we can. I know nothing about UFC except
16 that Conor McGregor is a big name in UFC.

17 THE COURT: So --

18 THE WITNESS: So, yes.

19 THE COURT: -- so let's back this up.

20 THE WITNESS: That we have --

21 THE COURT: Hold on a second. Hold on. Hold on. So
22 let's back up. Because, then, I don't want to use that.

23 If we assume, whether or not it's Conor McGregor or
24 someone else, that the marginal revenue product of fighters is
25 different such that it -- that it can influence the event

2:15-cv-01045-RFB-PAL

1 revenue such that I can't -- I don't have a comparable
2 competitive wage for that same exact fighter, why would I use
3 this as opposed to the event -- or wage share?

4 THE WITNESS: Can I go back to my slide with John
5 Wilson? Is that his name?

6 THE COURT: John Smith, I think.

7 MS. GRIGSBY: Oh, oh, 15.

8 THE WITNESS: 15.

9 MS. GRIGSBY: John Howard.

10 THE COURT: John Howard.

11 THE WITNESS: I'm sorry. If John Howard is listening,
12 I apologize.

13 So I think the answer to your question is here. So --
14 and what I would do is -- what I've done in my regression, my
15 wage regression, and also what Singer did in his regression, is
16 use dummy variables for every fighter. So then we have -- let's
17 just say -- and it's not true in this case, but I'm going to
18 take this illustration and make it more hypothetical. Let's
19 just say that in one of those the foreclosure share was 0 and in
20 the other it was .8 or something like that.

21 THE COURT: Right.

22 THE WITNESS: Then this difference in pay across John
23 Howard's two fights would tell me -- would exactly give me that
24 counterfactual that you're asking for, A. And, B, again,
25 subject to the fair criticism that this is an example and not --

2:15-cv-01045-RFB-PAL

1 and -- that we already -- that I've already admitted to, just
2 look -- if you look at that, do you want to -- which of those do
3 you think is a more reasonable way to think about MRP? And then
4 if one of them had high foreclosure and the other didn't, which
5 of those would you rather measure it with? Event compensation
6 or fighter compensation share? That's not a hard decision.

7 BY MS. GRIGSBY:

8 Q. So just to put a pit in it, though, under -- using log
9 compensation, John Howard's compensation could go up, correct,
10 and you would still -- would you -- you could still find
11 significance, correct?

12 **A.** Sure. If -- if John Howard's compensation goes up and
13 foreclosure goes up, what you're going to find is, when you put
14 in, for example, the year effects or the arena effects or
15 something else, that's going to pull out the fact that John
16 Howard's pay is going up for reasons that have nothing to do
17 with it.

18 But putting event -- but, instead, dividing -- I mean,
19 instead looking at his fighter share, it's just -- it doesn't
20 make any sense on its face. It's just not the right way to do
21 it.

22 THE COURT: So from your understanding of this
23 literature, why do they use this? Because I have been presented
24 with articles here that talk about, in the NFL and baseball,
25 looking at a sort of event or game revenue or in boxing, boxing

2:15-cv-01045-RFB-PAL

1 revenue, and using that as a way to negotiate what would be a
2 fair or appropriate wage. It's not as if this is the first time
3 in this case that an expert has ever come up with this idea --
4 or at least I shouldn't say an expert, but people knowledgeable
5 in these -- in this industry have ever come up with an idea that
6 we should look at a percentage of the event revenue. So why is
7 that such a commonly used sort of metric?

8 THE WITNESS: Well, first of all, most of -- it's
9 almost always used -- I won't say always because --

10 THE COURT: Right.

11 THE WITNESS: -- as Professor Manning said, you get in
12 trouble when you say always. It's almost always used in the
13 context of team sports. So I've not seen even just general
14 discussions of labor share in other individual sports. I don't
15 think -- you know, when people analyze tennis and golf, they
16 don't talk about the golfer's share of the revenue. That's just
17 not -- if you look at the articles, it's not talked about.

18 So that's one distinction. And why is that a
19 distinction? Because for reasons that just out of convenience,
20 that's something the collective bargaining agreements have
21 focused on. Let's think about being partners and we're going to
22 share this revenue, and that's the way it's going to be done.
23 Now, that's asking them to be your partner and so forth. You're
24 taking -- you're taking it out of a standard labor market
25 context.

2:15-cv-01045-RFB-PAL

1 The other thing to keep in mind is, while you have been
2 presented with these sports articles that talk about wage share,
3 you've not been presented with a single article that runs a
4 regression of an individual athlete's wage share. And you
5 should also keep in mind that Dr. Manning wrote both a book and
6 a handbook chapter and -- about monopsony, never once mentioned
7 any of these sports articles.

8 So I -- the pretext of -- the base -- you've been
9 presented with these articles, but to a labor economist, they're
10 just not state of the art. They're not something we do.
11 They're not something that has ever caught the attention of
12 Professor Manning or myself or others in this field.

13 THE COURT: So how would you estimate the but-for wage
14 if you don't have the actual wage where event revenue is related
15 to a fighter compensation and where you believe that the actual
16 level of compensation is suppressed by monopsony power?

17 So how would you come up with -- if you're not using
18 wage share -- let's say you don't use that. If I asked you to
19 say, Okay, Professor Oyer, I want you to come up independently
20 with a model for this based upon what information was available
21 and is available in this type of case, what would you do?

22 THE WITNESS: Can I have my -- the table back. Can we
23 just pivot back to the -- my regression --

24 MS. GRIGSBY: 8.

25 THE WITNESS: -- next to --

2:15-cv-01045-RFB-PAL

1 MS. GRIGSBY: Um-hmm.

2 THE WITNESS: Foreclosure -- you need to be -- you need
3 to have ...

4 There might be other ways to do it in certain other
5 contexts. The first thing I would want to do, and it applies in
6 this context, is find a proxy for monopsony power.

7 THE COURT: Right. Okay. But I agree with you. So if
8 you see that there's a monopsony -- let's say you find there's a
9 monopsony for -- I mean, a proxy, excuse me, for monopsony
10 power, which is foreclosure share. That still doesn't give you,
11 though -- that tells you potentially the relationship, right,
12 but it doesn't tell you what the but-for wage would be.

13 So my question is, let's assume you establish it. I
14 know you don't necessarily disagree with Dr. Singer's findings
15 regarding foreclosure share, but let's say for the moment that's
16 an appropriate proxy --

17 THE WITNESS: We'll give you that.

18 THE COURT: -- for monopsony power. What would you do,
19 then, to estimate what would be the but-for wage if you know
20 there's a relationship?

21 THE WITNESS: It's right here. It is in this table on
22 the right.

23 THE COURT: Okay.

24 THE WITNESS: So I would take John Howard's pay that
25 night -- the log of his pay that night, and I would say -- let's

2:15-cv-01045-RFB-PAL

1 say he was paid \$42,000 or whatever it is, and then I would undo
2 to the foreclosure share. So I would say, let's take his
3 estimated pay in a world where foreclosure share is equal to
4 zero. That is the but-for world.

5 THE COURT: Yes, but isn't that assuming a direct
6 proportionality to foreclosure share and the wage? Because --

7 THE WITNESS: You're right. He's --

8 THE COURT: -- because you're assuming that the
9 foreclosure share of the monopsony power would be directly
10 proportional to the level of the wage, right?

11 THE WITNESS: You're saying -- I mean, we're -- yes.
12 Dr. Singer's regression which, you know, as I said, I'm not
13 going to vouch for or against his choices of foreclosure share.

14 THE COURT: Right.

15 THE WITNESS: But one thing he's done is he's chosen to
16 specify it as a linear relationship.

17 THE COURT: Right.

18 THE WITNESS: And I bet he would say, and I would agree
19 with him, that that's a -- that's a naive beginning and we can
20 investigate the degree which we can relax that if we thought it
21 mattered, but as you see in the right-hand side regression I've
22 run, it doesn't matter anyway.

23 But if it did, you might want to say, well, let's think
24 about, sure, the difference between zero foreclosure and .3
25 might be very trivial; whereas, the difference between .7 and 1

2:15-cv-01045-RFB-PAL

1 might be huge. Yes. So this is assuming a linear foreclosure
2 share. But that's -- that's irrelevant. That's an important
3 point for estimating the -- for estimating the impact, if there
4 were any impact. But it's not relevant to the choice of
5 left-hand side variable here at all --

6 THE COURT: And --

7 THE WITNESS: -- is what we're talking about.

8 THE COURT: -- because it's not --

9 THE WITNESS: Because he's -- I mean, he's not changing
10 his foreclosure share. The linearity of the foreclosure share
11 assumption holds in what he's doing just as much as it does in
12 what I -- what I did.

13 THE COURT: And why do you think you didn't find
14 foreclosure share here to be significant where he did?

15 Because even with -- even with -- even if you're doing
16 the log of compensation, if it's an accurate measure of
17 monopsony power, it should still -- should still have some
18 effect, right?

19 THE WITNESS: Not if -- so, I'm not a -- I'm not an
20 antitrust labor economist, so I don't throw around terms like
21 procompetitive that --

22 THE COURT: Right.

23 THE WITNESS: -- effectively. But pretend I do,
24 pretend I'm doing it well. And, you know, there's probably --
25 as Zuffa is taking over and increasing its market share, Zuffa's

2:15-cv-01045-RFB-PAL

1 the place everybody wants to be. They're creating more value.
2 They're capturing a lot of that value, sure, but the fighters
3 are still better off because they're making more than they would
4 have in the but-for world. Or I shouldn't say more. The
5 coefficients are positive. I'm not going to claim they're
6 making more.

7 THE COURT: Right.

8 THE WITNESS: They're making -- there's no evidence
9 they're making less.

10 THE COURT: Right.

11 THE WITNESS: That's all --

12 THE COURT: Well, because your --

13 THE WITNESS: -- that's my claim.

14 THE COURT: Well, I'm saying because your model also
15 shows that essentially there's no -- either foreclosure is not
16 an accurate measure of monopsony power, or if it is, there's no
17 monopsony power because, right, it's not showing a statistically
18 significant effect on the log of compensation, right?

19 THE WITNESS: Yeah, but we'd start from the assumption
20 that foreclosure share is capturing the market -- the monopsony
21 power. If I start from that assumption, then we'll just assume
22 there's some monopsony power, but it's not having any
23 negative -- there's no evidence that it's having any negative
24 impact on pay.

25 You know, I'm not going to -- I'm not actually willing

2:15-cv-01045-RFB-PAL

1 to concede there is monopsony power, because I don't know about
2 the foreclosure share.

3 THE COURT: Right.

4 THE WITNESS: But if you just take that as the measure
5 and say, Yes, we think that's monopsony power, then I look at my
6 regression and I say, There's no evidence whatsoever that it's
7 lowering pay. In the but-for world where foreclosure share is
8 zero, I have no reason to think that fighters in this regression
9 would have higher pay.

10 THE COURT: Got it. Thank you, Professor Oyer.

11 Ms. Grigsby.

12 THE WITNESS: Can I -- can we -- well, we're going --
13 you go ahead.

14 BY MS. GRIGSBY:

15 Q. I was just going to walk you through -- since we're already
16 on the results of your regression --

17 **A.** Yeah.

18 Q. -- I wanted to talk a little bit more about how the results
19 of your regression compare to Dr. Singer's results.

20 **A.** Yes.

21 Q. So you mentioned -- we've already gone through the fact that
22 you don't think labor share is the correct dependent variable.
23 But did you see other problems with Dr. Singer's regression?

24 MS. GRIGSBY: Can I have slide 9, please.

25 THE WITNESS: Yeah. So am I -- is it one more slide

2:15-cv-01045-RFB-PAL

1 where I've highlighted this? I mean, it's hard for me to see,
2 but I know the things here quite intimately.

3 BY MS. GRIGSBY:

4 Q. And there's a monitor over there.

5 A. Oh, that's fine. Yeah.

6 So, Your Honor, you've run some regressions. You
7 understand the details of regressions. So let me just -- so
8 forget about the technical details for a second. Let's think
9 about how I as an economist would specify a model.

10 The first thing I would do is I would say in this case,
11 I want to know the relationship between foreclosure share and
12 pay. And we're going to get to that. We both do, eventually.
13 But before I throw in foreclosure share, I'd like to know did I
14 specify my model properly or not. So what do I do? I say,
15 Okay. Well, what are some things where I know I have direct
16 evidence? I know deep in my heart and nobody can change my mind
17 that there is a causal effect of this variable on pay.

18 THE COURT: Right.

19 THE WITNESS: And I'm going to look at my regression
20 and make sure that's there first. So let me give you an example
21 outside of this one. Every labor economist has run at some
22 point a regression of log pay on a bunch of stuff in the broader
23 context, and they always have education on the right-hand side.

24 I recently wrote a paper using some new data from
25 Norway where I was trying to figure out pay and making sure I

2:15-cv-01045-RFB-PAL

1 had it right. I didn't care about education, but the first
2 thing I did was make sure that when I ran my pay regression -- I
3 was looking at entrepreneurship and things that had nothing to
4 do with college, but I wanted to make sure that that education
5 variable had a big positive coefficient in my pay regression.
6 Why? Because I know there's a large causal effect of schooling
7 on how much the person pays -- makes.

8 Now, in the Zuffa context, I don't think education is
9 in -- I don't have education data and I have no reason to have
10 that same bias about what education would do. But there are
11 several variables where I know before I run the regression I
12 better get an effect of this or else I've done something wrong.
13 My variables are miss -- my regression's miss-specified.

14 And in the report I focus on win flag. Here, I focus
15 on a few others. What is win flag? Win flag is an indicator
16 variable that equals one if the person won that night and equals
17 zero if the person lost that night. By contract, 90-plus
18 percent, if I'm not mistaken, don't -- I can check that number,
19 but it's 90-odd percent of Zuffa fighters have a -- have a
20 contract similar to what you see on the screen now that says, if
21 you win, you will make as much as you did just for showing up.
22 That's -- and we saw that in my John Howard?

23 BY MS. GRIGSBY:

24 Q. Yes.

25 **A.** John Howard regressions already. The only difference in his

2:15-cv-01045-RFB-PAL

1 pay was that he won one night and lost the other.

2 I don't have a sensible pay regression if winning
3 doesn't lead me to believe that pay goes up. It just has to be
4 there or the regression's wrong. There's a couple of other
5 examples highlighted on the previous slide. So what do you see?

6 Go back.

7 Q. Yep.

8 **A.** So you see in my regression on the right-hand side, that
9 number is something like .3. And if you undo the log effect, it
10 says that if I win, holding everything else equal, including the
11 fighter on that night. Remember John Howard was -- I have the
12 fighter fixed effect for John Howard. So if I hold everything
13 else equal and I look at the win flag, it says, everything else
14 equal, if I win, I get 40 percent more.

15 That's -- that's how the regression should work. We
16 know that's how the world works. That's how the regression
17 should work.

18 Dr. Singer, on the other hand, finds an estimated
19 coefficient near zero, standard errors that are very large, and
20 there's -- his regression tells you there's no reason to think
21 that if a fighter wins that night they'll make more money. That
22 on its face -- I mean --

23 THE COURT: But doesn't he have another factor that
24 also deals with the record? And so, I'm just saying that
25 because I want to be fair to him and to you, right, and I don't

2:15-cv-01045-RFB-PAL

1 know if you had the same factor. I think he had another factor
2 regarding the records. Did you --

3 THE WITNESS: We have exactly the same regressions.

4 THE COURT: Okay.

5 THE WITNESS: All I've done is changed the left-hand
6 side variable.

7 THE COURT: Okay.

8 THE WITNESS: Now, what he did -- what he explained in
9 his rebuttal report was something about multicollinearity.

10 I don't -- I don't want to be a jerk, but that was --
11 what he wrote there was, you know --

12 THE COURT: Not credible, in your view.

13 THE WITNESS: It's beyond not credible.

14 THE COURT: Okay.

15 THE WITNESS: It's -- it's -- it's a little -- it was
16 not right. And the reason for that is he explains
17 multicollinearity breaks down the win -- he can't get his win
18 flag regression to work because of multicollinearity.

19 Your Honor, regressions are run because variables on
20 the right-hand side are collinear. That is why we've run
21 regressions. If he didn't have -- if things weren't collinear,
22 we wouldn't have run a regression. We would have just looked at
23 how pay changed as -- the same time as foreclosure share
24 changed.

25 So the idea that win flag would be undone by these

2:15-cv-01045-RFB-PAL

1 other things is just simply ridiculous because these other
2 things are slightly correlated with it, but they don't change
3 the fact that the true causal effect on pay comes from winning
4 or as -- to use other examples, the dummy variable for
5 Pay-Per-View, which also shows up very dramatically in my
6 regression, we know you get more money if you get Pay-Per-View.
7 And in his regression it just doesn't show up.

8 THE COURT: So I just want to go back to a point that
9 you made earlier, just so that I understand. In terms of at
10 least this particular slide, this slide, even though it pulls
11 out particular variables, it's based upon you running the same
12 variables that he ran. The only difference is you're not using
13 wage share, you're using log of compensation.

14 THE WITNESS: I took his program and in the -- and the
15 part where it says regressed, blah, blah, blah.

16 THE COURT: Right.

17 THE WITNESS: I changed blah, blah, blah --

18 THE COURT: To log.

19 THE WITNESS: -- from what he had to log of
20 compensation that night.

21 THE COURT: Okay.

22 THE WITNESS: That is it.

23 THE COURT: And so what you're saying, if I understand
24 you correctly is, that you have to start -- in any regression
25 you try to start with variables or factors that you know have

2:15-cv-01045-RFB-PAL

1 some influence on the left-hand side. And you do that to help
2 you sort of, for lack of a better term, stay honest about the
3 validity of your model, right. And so you start with that
4 assumption.

5 And so what you're saying is that one of the things
6 that should have led him and should lead me to question
7 Dr. Singer's model is that a factor or variable that you think
8 is understood industry-wide as being significant in terms of
9 compensation, whether it's wage share or log of compensation,
10 which is the win flag, is not statistically significant in his
11 regression. Is that right?

12 THE WITNESS: And I -- that was exactly right. I
13 completely agree with everything you said. I would just add if
14 you go down his list of regression coefficients, you can find
15 several cases where you would say that doesn't make sense. If
16 you go down my list, you will not find a situation where you say
17 that doesn't make sense.

18 THE COURT: So one of the questions I have for you,
19 Professor Oyer, which is -- goes back to this, and this happens,
20 as I'm sure you know, a lot with regression analysis is,
21 starting with certain fundamental assumptions, there can be
22 disagreements about the assumptions even as relates to, for
23 example, win flag. So Dr. Singer might say, Well, I thought win
24 flag would matter, too, but the regression analysis doesn't lie
25 and there can be circumstances in which it doesn't actually

2:15-cv-01045-RFB-PAL

1 influence that.

2 How am I to distinguish between those two things?
3 Because that happens, as you know, frequently with regression
4 models where you have a foundational difference as relates to
5 assumptions. The question is, is there anything in this
6 analysis that you can point me to, statistically speaking, that
7 would also tell you that there is an error here?

8 THE WITNESS: Yeah. So let's draw an important
9 distinction between a hypothesis and a known relationship.

10 THE COURT: Okay.

11 THE WITNESS: So often, sure, we'll have a hypothesis.
12 I think tenure on this job is going to lead to higher pay, would
13 be one in a wage regression. I think the quality of the college
14 or law school you went to is going to be related to your pay.
15 And then I'll say, I'm sure I'm going to find that. And then
16 you'd run the data, and if you don't find it you'd say, Huh,
17 maybe I was wrong.

18 But win flag is not one of those variables.

19 THE COURT: And so --

20 THE WITNESS: Win flag is the contract. It's in the
21 contract.

22 THE COURT: So you're saying because you know
23 automatically from the contract that in fact the compensation --
24 monopsony power or not -- is going to increase absolutely,
25 right, then the win flag should have some effect as it relates

2:15-cv-01045-RFB-PAL

1 to the model.

2 THE WITNESS: And if it doesn't, you've specified your
3 model incorrectly.

4 THE COURT: So let me ask this one question. If the
5 increase in the compensation is negligible compared to what the
6 increase in compensation would be if it were truly a competitive
7 market, would you see the results that he sees?

8 So, in other words, the argument that they have made
9 is, well, in a truly competitive market, if one of these
10 fighters is getting paid what they would otherwise be paid in
11 the but-for world, they'd be getting paid a much larger sum.

12 If that were the case -- and I'm not saying I find it,
13 but if that were the case, would you still see a statistically
14 significant impact on win flag or not?

15 THE WITNESS: Oh, absolutely.

16 THE COURT: Okay.

17 THE WITNESS: If you don't have win flag having a
18 statistically significant effect, something's wrong with your
19 model.

20 THE COURT: Okay. Thank you.

21 Go ahead, Ms. Grigsby.

22 BY MS. GRIGSBY:

23 Q. And I just wanted to address another thing that Dr. Singer
24 said, which is that if he ran an F test with the collective
25 significance of the win flag and certain other variables, that

2:15-cv-01045-RFB-PAL

1 they are collectively highly statistically significant. To you,
2 is that a reasonable explanation for why these variables were
3 not significant in this regression?

4 **A.** No. So, the F test that he runs, again, in his response, I
5 just -- I think it's an amateurish response, is the only word I
6 can use. He says let's run an F test and that will somehow come
7 to the -- be the savior that will come and save his win flag
8 result. There is just no reason why you would run an F test.
9 What he does is he then says, Well, it's jointly significant
10 with all of these other things that may or may not be correlated
11 with win flag. He doesn't test -- an F test is meant to test a
12 hypothesis.

13 I have a hypothesis. I tested it. It is that if I
14 win, I will get more money that night. I tested that, and I now
15 know the answer to it.

16 His -- his F test is -- there's no underlying
17 hypothesis. It's this bunch of stuff together, something
18 matters. That's not the way to do it.

19 Now, he then cites to a couple of papers that run F
20 tests. But what they've done in that paper -- in those papers,
21 which are not labor papers and not wage regressions and not in
22 any way related to what's going on here. What they did in those
23 papers were, they took a bunch of closely related things that
24 are all trying to capture the same thing, but they weren't quite
25 sure mechanically how to specify that variable. So they weren't

2:15-cv-01045-RFB-PAL

1 sure whether they should put in GDP or lag GDP or something like
2 that. So they said, We don't have a prior on which of these
3 things matter, but we have a hypothesis that GDP over some
4 period of time matters. And they put all of those into their
5 regression at the same time and tested the hypothesis, does GDP
6 matter.

7 Well, that's -- that's -- that's not what he's doing.
8 That's just not relevant to this -- that's not only not what
9 he's doing, it's not relevant to this case at all.

10 Q. So now I want to move on a little bit to talking about some
11 of the criticisms of Dr. Topel's regression. And
12 Professor Manning in particular mentioned the fact that
13 Dr. Topel's regression gives an unexpected result because you
14 only see an 8 percent increase if revenue doubles.

15 MS. GRIGSBY: So right now can I pull up on the screen
16 Topel report, Exhibit 13, and Oyer Table 1. So that's JCCX 51,
17 Exhibit 13, and JCCX 50.

18 THE WITNESS: Don't I have a slide that gives us what
19 we want here?

20 BY MS. GRIGSBY:

21 Q. Should be -- we're just going to blow it up.

22 A. That's fine. That's fine.

23 So these are --

24 MR. DAVIS: I'll just note an objection for the record.
25 We did agree to share slides that we would be using on direct

2:15-cv-01045-RFB-PAL

1 beforehand. If there's a slide, it would be helpful. If not,
2 if there's not a slide --

3 MS. GRIGSBY: We are not using a slide. We're just
4 responding on the fly. So we're responding to what
5 Professor Manning said this morning.

6 MR. DAVIS: This is at odds with our agreement.

7 THE COURT: I'm sorry. It's at odds with?

8 MR. DAVIS: We had an agreement that 45 minutes before
9 each direct examination we would provide the other side the
10 slides we'd use in direct examination. And so we did so this
11 morning in anticipation of the direct examination today. And my
12 understanding is that as this is part of this direct
13 examination, counsel is now not abiding by our agreement, but
14 rather introducing a new slide that we did not see as was
15 required according to our agreement. And so I'm objecting to
16 the use of these materials on that basis.

17 MS. GRIGSBY: Can I just respond briefly, which is,
18 these are actual exhibits.

19 THE COURT: I understand that, but did you -- was there
20 an agreement to share information?

21 MS. GRIGSBY: We did share slides, but this is -- this
22 is not a creation where we're altering what is in the exhibit at
23 all. We're just pulling it up like we would deposition
24 testimony. The only difference is that it's side-by-side.

25 MR. DAVIS: We -- we did -- that is, many of the slides

2:15-cv-01045-RFB-PAL

1 consisted of exactly that. We used hearing testimony and we
2 provided that in advance as a part of a slide. I think --

3 THE COURT: Well, let's see where it goes, Mr. Davis.
4 I'll allow Ms. Grigsby to use it.

5 Go ahead, Ms. Grigsby.

6 BY MS. GRIGSBY:

7 Q. So Professor Manning testified that because Dr. Topel's
8 regression only shows an 8 percent increase in fighter
9 compensation when revenue doubles, that that was, in his words,
10 an alarm bell. Do you agree with that?

11 A. Yeah. I was a little disturbed by that. That was a false
12 alarm. It was not an alarm bell. 8 percent increase in
13 revenue, I was a little --

14 THE COURT: I'm sorry. 8 percent increase in?

15 THE WITNESS: I'm sorry. For -- 0.8 on this regression
16 on the left, which is Dr. Topel's regression, which is just my
17 regression only adding revenue as a control variable on the
18 right-hand side. Okay. That's all that's going on here in the
19 fourth, fifth, and sixth column of the left-hand side
20 regression.

21 THE COURT: Uh-hmm.

22 THE WITNESS: And you look at the revenue numbers, and
23 they're consistent with what Dr. Manning talked about this
24 morning. They're 0.08, roughly, and that tells you that for a
25 one unit increase in log revenue, or doubling of revenue sort

2:15-cv-01045-RFB-PAL

1 of, you get an 8 percent increase in fighter compensation.

2 And Dr. Manning suggested that this was -- there was an
3 alarm bell because it was too small of a number. I mean, I
4 just -- I find that very puzzling. There's absolutely no reason
5 to think this number should be high at all.

6 THE COURT: So why not? If a boxer or a fighter goes
7 in and they increase revenue substantially, let's say
8 200 percent, why wouldn't you want to at least look at that?
9 And, again, part of this relates to how am I to know that.
10 You're saying that, Professor -- and I obviously don't doubt
11 that you mean that, but how do I know that that actually doesn't
12 make sense? Is there something that I can look to that tells me
13 that? Because part of the challenge here is that we don't have
14 a comparable market --

15 THE WITNESS: Yep.

16 THE COURT: -- that I can look at to say, Ah, here's
17 what the true competitive wage would be --

18 THE WITNESS: I agree.

19 THE COURT: -- for a fighter. And so the challenge
20 that I face isn't that you all haven't raised potentially
21 significant criticisms, but as you know as an econometrician,
22 oftentimes you're in a situation where you're trying to model
23 something that there's not a perfect model for. So how do I
24 know -- going back to this question, how do I know or how can I
25 gauge or evaluate you saying it shouldn't be alarm bells and

2:15-cv-01045-RFB-PAL

1 Professor Manning saying it does?

2 THE WITNESS: So in this specific case, I'll try to
3 answer that. And it's a judgment call, of course, but I think
4 that -- I think that at the end of the day -- again, it comes
5 back to that distinction from before about I have a hypothesis
6 versus I know the answer. With revenue I don't know the answer
7 for sure. I have a hypothesis that these numbers should go up.
8 However, I have no reason to think that revenue should go up
9 once I've controlled for all of the things we're controlling for
10 in our regression.

11 THE COURT: You mean compensation should go up?

12 THE WITNESS: That compensation should go up one --
13 thank you. Thank you for correcting me.

14 When revenue goes up, compensation is going to go up
15 for, sure, on average. I would expect that to be the case. But
16 not necessarily for an individual fighter.

17 THE COURT: Right.

18 THE WITNESS: So John Wilson, I showed you before, had
19 very different pay -- had very similar payouts across two fights
20 because he was still John --

21 MS. GRIGSBY: Howard.

22 THE COURT: You mean Howard.

23 THE WITNESS: So sorry.

24 THE COURT: That's all right. We've all said different
25 names, but we --

2:15-cv-01045-RFB-PAL

1 THE WITNESS: I'm sorry about that. I'm sorry to him.

2 So John Howard had pretty similar pay across the two
3 nights. Revenues were dramatically different. Why would we --
4 but -- so some of that may flow through to him, 8 percent if
5 there's a doubling, for example. And that makes sense to me.

6 But keep in mind that all of these regressions have
7 fighter -- have dummy variables for every single fighter. So
8 there's a dummy variable for John Wilson that's taking -- that's
9 noting that, sure, John Wilson's in this fight and revenue's
10 much higher, but he's still John Wilson. And so I don't really
11 think he has to get paid that much just because this one fight
12 he's in, you know, has bigger names on the same ticket. There's
13 no reason to think that that revenue increase is going to flow
14 to John Wilson, especially when I control for the fact that he
15 is still John Wilson.

16 These -- these regressions also -- also control for the
17 arena it's in. So if I'm in a much bigger arena, revenues might
18 be bigger because there's more seats. I don't know that that's
19 true, but I'm -- you know. So they control for fixed effects
20 for each individual arena. So, again, it's not that -- that
21 revenue -- that there's some number. I'm not saying 8 percent
22 is exactly right or exactly wrong. I'm just saying neither
23 Dr. Manning nor I have any reason to say this number should be
24 so-and-so. It's not like win flag. Win flag, we have a very
25 good reason to say that number has to be really high.

2:15-cv-01045-RFB-PAL

1 Here, we don't know. We're running a regression.
2 We're controlling for a lot of other things that are related to
3 revenue and that's that.

4 THE COURT: Okay.

5 BY MS. GRIGSBY:

6 Q. So I just want to go back a little bit when you talked about
7 just generally as a matter of theory what your thoughts on labor
8 share. Now, for -- from the standpoint of a labor economist,
9 why wouldn't you use wage share to determine whether there is
10 monopsony power?

11 A. Right. So this kind of -- let me relate that back to the
12 revenue point. Because one of the criticisms that came up of
13 revenue this morning was that it's endogenous. There was this
14 endogeneity problem that we talked about. And, you know, that
15 might cause omitted variable bias or measurement error.

16 And truth be told, everything -- every regression has
17 some degree of measurement error and omitted variable bias. So
18 whether we put revenue in or not doesn't affect my results
19 there. And I don't think it's a big deal about whether
20 revenue's in there or not.

21 But literally, the worst way I can think of to solve
22 the problem, if revenue is in fact an -- if there is some sort
23 of problem with revenue that's either an endogeneity problem or
24 an omitted variable problem or anything else, literally the
25 worst way I can think of to solve that problem is to move it

2:15-cv-01045-RFB-PAL

1 over to the left-hand side of the regression.

2 THE COURT: So let me ask you a question,
3 Professor Oyer. What if, in fact, in the context of the
4 industry, the marginal revenue product is related to event
5 revenue. Would it look like the model that Dr. Singer has?

6 Because part of this, again, is we have competing
7 models. I don't have anything necessarily that tells me, in
8 terms of just like sort of art of error, that they're absolutely
9 invalid. You all have made different assumptions about this.
10 If it actually is related to what the but-for wage would be, is
11 his model the appropriate way to go about doing it?

12 THE WITNESS: No, I would say that's definitely not the
13 case.

14 THE COURT: Okay. So and tell me about why, even if
15 you thought that in this industry --

16 THE WITNESS: Yeah.

17 THE COURT: -- there was a relationship between the
18 but-for wage and particular event revenue, why wouldn't wage
19 share be an appropriate way to look at the -- why wouldn't that
20 be an appropriate measure?

21 THE WITNESS: Revenue includes so many things that
22 go -- that have nothing to do with labor. They include --

23 THE COURT: I'm talking about event revenue, so --

24 THE WITNESS: I know. I know. Even event -- even that
25 night's revenue includes all sorts of things that have nothing

2:15-cv-01045-RFB-PAL

1 to do with labor: the amount Zuffa spends on marketing, the
2 size of the arena I mentioned before, all of these other things.

3 So I've got all this in there, and these -- all of
4 these things are driving revenue. And it might be related to
5 pay, and so we could have an argument about whether you control
6 for it or not in the wage regression that I think makes sense.
7 But taking this very noisy variable that, as the John Howard
8 example shows you, kind of jumps around while despite the fact
9 that the MRP is certainly not jumping around by a factor of six
10 within a few months of each other, why would I take this
11 incredibly noisy variable and just magnify any problem I have
12 with it by suddenly dividing my -- my dependent variable by it?
13 It's just not how you would solve -- it's -- you don't -- you're
14 magnifying the problem. You're not fixing it.

15 THE COURT: So let's assume that marginal revenue
16 product is one factor that contributes to event revenue. And
17 let's say that I have seven factors.

18 THE WITNESS: Yeah.

19 THE COURT: If I have the other six factors on the
20 right side of my equation, would that not, then, if it -- if
21 marginal revenue product is being controlled for, would in that
22 case event revenue not be an appropriate measure as it relates
23 to marginal revenue product for the particular fighter?

24 THE WITNESS: Gee, I really don't think so. I mean, I
25 come back to the textbook model when the counterfactuals we run

2:15-cv-01045-RFB-PAL

1 there are just, how much does the person make in a competitive
2 world and how much do they make in a monopsonistic world.

3 THE COURT: Yes, but we don't have that. We
4 acknowledge the fact that in this industry this is not -- this
5 is not necessarily an ideal model, but my question to you is
6 this. If you acknowledge, which I think that everyone has
7 acknowledged, that the marginal revenue product of a fighter has
8 some impact --

9 THE WITNESS: Yeah.

10 THE COURT: -- on the event revenue.

11 THE WITNESS: Yep.

12 THE COURT: If I say there are seven factors of it for
13 event revenue, six of which have nothing to do with the fighter,
14 if I control for those six -- and I'm not saying they have.

15 THE WITNESS: Yeah.

16 THE COURT: But if I have controlled for those six on
17 the right side of my equation, would that not be, then, a valid
18 way to try to measure how the marginal revenue product for the
19 fighter impacted the particular event?

20 THE WITNESS: I just don't see how that solves any
21 problems. We have wage share is -- we are -- we have a notion
22 that the economists have been using for decades, which is, we
23 run a wage regression, and that tells us something about but-for
24 worlds. And they don't have to be foreclosure shares. They can
25 be but-for I went to college, but-for I went to a better

2:15-cv-01045-RFB-PAL

1 college, whatever regressions we run. And we have -- we have --
2 we have a toolbox for doing that.

3 And sometimes we make changes to that toolbox, but when
4 we do that, we expect the results to come out of them to be
5 sensible.

6 THE COURT: Yes, but why isn't -- why isn't -- if there
7 is in fact a relationship, why isn't the model sensible? That's
8 part of the question. I think one of the things you pointed out
9 to me is you looked -- you thought, at least as relates to win
10 flag, one particular variable, that that variable should have a
11 particular statistical significance in the model and it doesn't.
12 So that should be one red flag as related to the model.

13 Can you point to others that you think exist? Because
14 I think for me, that's helpful because that's potentially, at
15 least, an objective thing that I can look at. Is there anything
16 else like that, Professor Oyer, that you can point to about
17 Dr. Singer's model?

18 THE WITNESS: Yeah, I think the other -- a couple of
19 other things I would point to. One is we're starting from --
20 don't forget everything he does, as we started with, assumes
21 this proportionality. We have -- we don't need that in my
22 world. We need that in his world. So why would I impose this
23 additional unjustifiable assumption? I can't do it. And, then,
24 the other thing I would point to is to go back to my John Howard
25 slide.

2:15-cv-01045-RFB-PAL

1 MS. GRIGSBY: Oh, 15.

2 THE WITNESS: Again, if we just look at that, we see
3 that event revenue went up by a factor of six. And I just don't
4 see why that -- why we would think that that's indicative at all
5 of MRP. There's just -- to act as though event revenue is
6 solving our problems for MRP in a world where event revenue
7 fluctuates so much and fighter individual pay doesn't?

8 You know, I'm frustrated as you are as -- I think
9 Professor Manning and I and you can all agree on the following:
10 We're all frustrated by the fact that the marginal revenue of
11 product -- the marginal revenue product is not something we can
12 measure. And, therefore, we can't look cleanly and say, Yes,
13 this is monopsony, and no, that's not.

14 And I'm -- we've all been frustrated by that for many
15 decades. And how do we -- do we have a solution to that
16 problem? I hope we will some day. But I can tell you for sure
17 measuring labor share is not the solution to the problem.
18 There's just nothing to back that up in anything Dr. Singer's
19 done or any of the testimony of Dr. Manning gave you today.

20 THE COURT: Okay. Thank you, Professor Oyer.

21 THE WITNESS: Thank you.

22 THE COURT: Ms. Grigsby.

23 BY MS. GRIGSBY:

24 Q. Sure. So let's just look at your slide 6 for a minute. So
25 I just want you to walk through the example of why economists --

2:15-cv-01045-RFB-PAL

1 labor economists, such as yourself, use actual wages versus wage
2 share.

3 **A.** Right. So, this is just -- this is a simple example that
4 shows that there's just so much else going on in revenue besides
5 the product -- marginal product of labor.

6 So let's look at a programmer, and he or she might work
7 in four different jobs and one -- at one company they're paying
8 more, and maybe that's because they can use that person's skills
9 better and so they bid higher for their services and so forth.
10 But one is a hardware company. One is a software company.
11 There's all sorts of other things that drive revenue besides
12 revenue share.

13 So if I were to look across -- and this is not -- this
14 is a hypothetical. It's not a real example. But, again, it
15 comes back to the fact that if I could -- if I could look at an
16 individual's -- would I -- is it just the case that if I could
17 look at the individual and look at their share of revenue
18 created, would that solve all of our problems? No. I mean,
19 it's just not -- we still have revenue share bouncing all over,
20 even though marginal product of labor might be the same in any
21 of these situations because the firm's cost structures are
22 different. The firm's investments are different.

23 **Q.** Now, Dr. Singer has explained that labor share is
24 appropriate or he's justified using labor share because as you
25 heard Professor Singer -- I mean, Dr. Singer and Professor

2:15-cv-01045-RFB-PAL

1 Manning say the athlete is the product.

2 Does that explanation change your conclusion here?

3 **A.** Yeah, I -- that's an interesting distinction, but I don't
4 think in any way reflects on anything that's going on.

5 This idea that the athlete is the product somehow tells
6 us how we should specify the model, it just doesn't make any
7 sense. If the athlete were truly the product in the absolute
8 sense, these guys would be entrepreneurs. They'd start their
9 own businesses. And we'd see -- you know, there are many
10 companies where people start their own business. And, sure, we
11 look at their wage share because the whole company is theirs and
12 they own it.

13 But, in this context, the athletes aren't the product.
14 They're a part of the product. They're no more the product than
15 an Apple engineer who designs an iPhone and who creates millions
16 of dollars of revenue for Apple.

17 THE COURT: But how is that the case? If you
18 acknowledge that in fact a particular fighter can influence
19 ticket sales and revenue, whereas the knowledge about the
20 particular Apple engineer doesn't do that, how is it that you
21 can then sort of treat them the same as it relates to the type
22 of influence their individuality will have on their salary, if
23 you acknowledge that there's a difference in terms of marginal
24 revenue product for each product that is created by the company?

25 THE WITNESS: Look, there are valuable people at all

2:15-cv-01045-RFB-PAL

1 sorts of organizations.

2 THE COURT: No, I understand that. But what I'm saying
3 is that Professor Manning gave us an example, which I think is
4 potentially helpful, which says that no one buys an iPhone or
5 pays different amounts for different iPhones based upon which
6 iPhone designer or engineer designed it. Whereas, people
7 potentially -- and I think this has been acknowledged -- will
8 buy a ticket or pay for Pay-Per-View for a fight based upon
9 which fighters are there. How do you adjust for that in sort of
10 a standard, sort of, labor analysis?

11 THE WITNESS: I mean, I reject the basic premise.
12 Because --

13 THE COURT: So which part of about the premises do you
14 reject?

15 THE WITNESS: The first part where Professor Manning
16 says they don't buy it based on which designer. They don't know
17 the name of the designer, but the product is better if I have a
18 great designer who made a better product. That person's
19 marginal product of labor at Apple was huge. They designed a
20 better product that gives them an increase of 1 percent in
21 market share relative to Samsung. That person is a rock star.
22 We don't know their name. They are worth much more than John
23 Howard. And they have a much bigger influence on people in the
24 marketplace than John Howard.

25 THE COURT: Well, I'm not saying that there wouldn't be

2:15-cv-01045-RFB-PAL

1 a difference in terms of how a person might contribute to the
2 value of that.

3 THE WITNESS: Yeah.

4 THE COURT: But the question is, in terms of the
5 consumption of a particular product, whether or not familiarity
6 or knowledge of the particular, sort of, worker and the
7 acknowledgment that that actually has an impact in this area of
8 the industry, whether or not that's something that should be
9 taken into consideration when it relates to this.

10 THE WITNESS: Again, I just don't see why that matters
11 at all.

12 THE COURT: Okay.

13 THE WITNESS: It's not a relevant consideration.

14 THE COURT: Okay.

15 BY MS. GRIGSBY:

16 Q. I guess my question to you would be, does that rock star
17 programmer drive revenue at Apple?

18 A. Of course. The rock star programmer, the rock star
19 professor, the rock star lawyer, all of these people drive --
20 drive revenue to the establishments for which they work.

21 Q. Now, are you familiar with the Autor paper that both you and
22 Dr. Singer cite?

23 A. Yes, I am familiar with the Autor, et al. paper.

24 Q. Autor, et al. paper.

25 So, Dr. Singer has testified that the Autor, et al.

2:15-cv-01045-RFB-PAL

1 paper shows that economists used wage share or labor share to
2 determine, I guess, MRP.

3 Do you agree with that?

4 **A.** So the Autor paper is an interesting new paper which comes
5 to some very interesting conclusion and does use the words
6 "labor share" from time to time. But it has absolutely nothing
7 to do with the analysis being done in this paper -- I mean, I'm
8 sorry, in this case. And there's a couple of reasons for that.
9 One is they're not running wage regressions. They don't have
10 data on individual employees. And so this labor share is at a
11 much more macro level.

12 There's a whole literature cited to by Singer in his
13 response that suggests that labor share is somehow studied in
14 this literature -- in economics. It is studied. It is studied
15 by macroeconomists and this one recent labor economists paper,
16 but it's not studied in the context of monopsony and it's not
17 studied in the context of an individual wage regression.

18 THE COURT: And is part of that because you don't have
19 the data? Do you have the data?

20 So, in other words, the other issue that Professor
21 Manning brought up, which is you don't have that granular level
22 data to be able to do that type of analysis, and so we use a lot
23 of compensation or compensation in part because we don't have a
24 better metric to do that. How do you respond to that?

25 THE WITNESS: Well, first of all, I'd like to point out

2:15-cv-01045-RFB-PAL

1 that Professor Manning has written a book, a handbook chapter,
2 and many other articles on monopsony. Other people, Boal and
3 Ransom, wrote a review chapter about this.

4 All of them talked about wage regressions and studying
5 monopsony power. Not once did Professor Manning or any other
6 economist ever write down or say out loud, Gee, I wish we had
7 the data to run a wage share regression analysis. Instead --

8 THE COURT: Okay. But --

9 THE WITNESS: Nobody ever asked for this. Nobody ever
10 tried.

11 THE COURT: But, Professor Oyer, that's not my
12 question.

13 THE WITNESS: Okay. Sorry.

14 THE COURT: My question is, is it true that labor
15 economists typically don't have the information? Because
16 whether they asked for it or not, they may be using what's
17 available to them. And so one of the arguments that Professor
18 Manning said was we just don't have that data. Because of the
19 way that the data comes to us, we couldn't, even if we wanted
20 to, measure the marginal revenue product for a particular Apple
21 engineer because we don't have that information.

22 THE WITNESS: Yeah.

23 THE COURT: Is that true?

24 THE WITNESS: So I don't agree with this on two fronts.

25 THE COURT: Okay.

2:15-cv-01045-RFB-PAL

1 THE WITNESS: One is I don't disagree we want to do it
2 for all of the reasons we've already discussed. So I won't
3 review those, but win flag, whatever, whatever you want --
4 whichever of my arguments I could reiterate, I wouldn't do it
5 even if I had it because it doesn't seem to be sensible, at
6 least not in this case. I won't broaden it out to others.

7 The other thing is people have had it and not done it.
8 So we talked about the Scully paper. Well, he had it. He
9 didn't do it. Professor Manning suggested that he couldn't do
10 it. He had this regression of -- he had 150 -- and my memory of
11 the paper might be -- my memory of the paper could be wrong,
12 but, as I remember that paper, he had every ability to take the
13 wage of the employee and divide it by the team's revenue. In
14 fact, he'd measured MRP by looking at the team's revenue.

15 So I don't think that Scully chose not to do it and
16 could -- and, you know, he could have.

17 All of these other papers in sports that have come
18 since could have, not one of them has ever done that. The High
19 Tech workers case, I know there was this distinction, oh, you
20 can't do it because Apple -- whatever. Why not? Why would we
21 not -- why would we think that we can't take that High Tech
22 engineer and think about their share of the firm's revenue? I
23 don't understand the distinction there. Sure, they are a small
24 part of the overall firm, but so is John Howard. So that's a
25 matter of degree; not of -- there's no conceptual difference.

2:15-cv-01045-RFB-PAL

1 We have that data. We choose not to do it. We don't
2 always have it. He's right about that. But it's not like we're
3 sitting around saying, Gee, I wish I could do that. Oh, wow, we
4 need that data. Nobody's saying that.

5 THE COURT: So you're saying that that data's commonly
6 available at an industry level in terms of by -- within a
7 particular company by, I guess, unit and by whatever
8 measurements would be internally such that you could do that,
9 but economists, labor economists, don't do it?

10 THE WITNESS: I would say it's -- you said at an
11 "industry level." We often have it at the firm level. We have
12 varying -- we have a wonderful set of new data sets available
13 through the Census Bureau and even better data available from
14 Scandinavian countries where people are running all sorts of new
15 regressions all the time. But in there we know the company's
16 revenue. Nobody's running -- nobody's running a labor share
17 regression.

18 THE COURT: Thank you.

19 BY MS. GRIGSBY:

20 Q. So I just want to move on for the last part to just talk a
21 little bit about Dr. Zimbalist and what he did in this case.

22 So Dr. Zimbalist also uses revenue share to compare UFC
23 or Zuffa to the big four sports and boxing. Do you think that's
24 an appropriate comparison?

25 **A.** No. No. I don't -- I don't think so. So we already talked

2:15-cv-01045-RFB-PAL

1 about the comparison to the team sports, and I think that that
2 stands -- I think I'll just -- I won't reiterate, but basically
3 I just don't see why you would compare them to the team sports.
4 The cost structures are very different. The maturity of the
5 sport is very different.

6 Boxing is a more natural comparison. I would have to
7 agree that that would be the first place I would look. As an
8 outsider they look pretty similar. I don't watch either. But
9 having said that, the nature of the sports are very different.

10 My understanding is that some of the same challenged
11 conduct goes on in boxing anyway, so it's not a natural place to
12 look.

13 But, also, in terms of they're just at very different
14 states of maturation of the sport. So there's all sorts of
15 differences in supply and demand of boxers. There may be all
16 sorts of different demands -- differences between supply and
17 demand of boxers that would make it not a relevant comparison.

18 It could be a relevant comparison, but I don't have --
19 I don't see -- we shouldn't start from the assumption that it is
20 because there's all sorts of things that could make it very
21 different.

22 THE COURT: Well, part of the challenge here,
23 Professor, is I have to pick something, right? I can't sort of
24 say -- throw my hands up and say nothing works in order to be
25 able to evaluate the reasonableness of it. And so that's why I

2:15-cv-01045-RFB-PAL

1 think I have to sort of make some assessment.

2 My question to you is about boxing is if it were
3 established, and I'm not saying it has been, that in fact event
4 revenue was a metric used in relation to how a fighter was
5 compensated, would that then lend support to it being used in
6 MMA events?

7 THE WITNESS: So wait a minute. Are you saying that
8 suppose in boxing the person is literally paid a share of the
9 revenue brought in? Well, that's very different than what's
10 happening here.

11 THE COURT: No. But my question is -- I'm not saying
12 it establishes it. But if -- if in boxing or some other
13 industry the particular fighter or athlete's pay was directly
14 structured based upon event revenue --

15 THE WITNESS: Right.

16 THE COURT: -- would that lend support for it being
17 used in a similar industry?

18 THE WITNESS: I am going to have to think about that.
19 I would say that confuses a different thing here, which is not
20 so much the level of pay, but the form of pay. So we often
21 think about giving somebody equity in a company, giving somebody
22 benefits rather than pay.

23 Those are forms-of-pay questions, and once we start --
24 so it -- the issue you brought up there sounds like it's about
25 share -- revenue share, but it -- I think of that more as about

2:15-cv-01045-RFB-PAL

1 incentives or about the way in which I want to motivate the
2 person to work with me.

3 THE COURT: Well, I didn't say it's different forms.
4 But my point is that if in fact it's built into a contract, it
5 would be no different than what your argument was, right,
6 regarding the doubling of the actual compensation?

7 THE WITNESS: Oh, I see what you are saying.

8 THE COURT: Right. We would know that, in fact, it was
9 one of the metrics used. And I'm not saying that that's been
10 established, but if that were to be established, would that lend
11 support to using wage share as a metric?

12 THE WITNESS: Look, I would say there might be
13 conditions under which boxing would be a metric that -- a sport
14 that we would want to compare. Whether we would use wage share,
15 I -- you know, I just -- I'd have to think. I can't come --

16 THE COURT: No, what I'm saying is if the contract
17 explicitly included that, right --

18 THE WITNESS: If --

19 THE COURT: -- as one of the ways that salary was or
20 compensation was calculated, as you were saying no different
21 than, for example, in for Zuffa there's a doubling of the
22 compensation, if that were established -- and, again, I'm not
23 saying that it is -- would that not provide a basis, at least
24 potentially, for the use of wage share at least in that
25 industry, say boxing?

2:15-cv-01045-RFB-PAL

1 THE WITNESS: Maybe. I'd have to -- again, we have to
2 think about the all things equal sort of thing. So we just have
3 to make sure we're making an apples to oranges comparison. And
4 is there a hypothetical world in which you can convince me that
5 the apple -- it's an apples to apples comparison? Yes, that
6 hypothetical exists. I'm not going to rule it out.

7 THE COURT: Okay.

8 THE WITNESS: I don't -- I haven't seen it.

9 THE COURT: No, but what I'm saying is -- I'm just --
10 I'm trying to understand is you had said earlier that we know
11 that absolute compensation increases in these contracts, and so
12 that's a factor that should have significant influence in the
13 context of the modelling.

14 THE WITNESS: Right.

15 THE COURT: If we know, for example, in boxing that
16 event revenue and percentage of the event revenue is a form of
17 compensation, right, why wouldn't that then be an appropriate
18 measure to use as it relates to, like, boxer sort of competitive
19 wage?

20 THE WITNESS: It might be. It might be.

21 THE COURT: Okay.

22 BY MS. GRIGSBY:

23 Q. But to your knowledge, do boxers generally, besides the very
24 top boxers, get paid a percentage of revenue?

25 A. I'm going to plead ignorance here. I know nothing about how

2:15-cv-01045-RFB-PAL

1 boxers are paid.

2 Q. Have you reviewed anything in any of the expert opinions in
3 this case that boxers generally get paid a percentage of
4 revenue?

5 A. I may have, but I have long since forgotten the details of
6 them, to be honest.

7 Q. So I just want to move a little bit to the big four sports
8 because in the big four sports do you have any indication of
9 what type of labor market that is?

10 A. Yeah. So the big four sports is a completely different
11 world. It's collectively bargained. It's mature. It's -- we
12 have -- yeah, we have, sort of, issues with market power on both
13 sides. So the nature of that business is just very different,
14 and I just don't think it's an easy way to make a comparison.

15 I wouldn't -- there's no reason to think that an X
16 percent share in Major League Baseball tells us anything about
17 the appropriate share in Zuffa.

18 THE COURT: If you had to choose the most analogous
19 sport, what would it be?

20 THE WITNESS: So the -- I threw out as a proposal X
21 Games. And the reason -- the reason I like X Games is it has
22 two -- it's far from perfect. It's far from perfect.

23 I don't watch any of these things so I don't know, but
24 it's -- but it has two things that to a naive observer like me
25 make it a good comparison. One is it's at the early stages of

2:15-cv-01045-RFB-PAL

1 its history, so the investments are being made by the central
2 company or agency that's building the brand of the sport, UFC or
3 the X Games people. So that is a -- the other thing is it
4 appeals to a similar sort of daring fan who -- or, you know,
5 macho, daring fan. I don't -- you know, so off the top of my
6 head that seems like a reasonable place to start, but it's --
7 I'm not advocating it as the perfect comparison by any means.

8 THE COURT: Okay. Thank you.

9 MS. GRIGSBY: I have no further questions. I pass the
10 witness.

11 THE COURT: Thank you, Ms. Grigsby.

12 MR. DAVIS: Would it be possible to set up the ELMO?
13 Thank you.

14 CROSS-EXAMINATION OF PAUL OYER

15 BY MR. DAVIS:

16 Q. Good afternoon, Professor Oyer.

17 A. Good afternoon.

18 Q. Nice to see you again.

19 A. Same here.

20 Q. So one of the things you said is that you have seen -- I
21 just want to make sure I have this right -- that you have seen
22 no evidence of proportionality in this case. Is that right?

23 A. I believe I -- yes, I will -- I would say I have not seen
24 any evidence of proportionality.

25 Q. Okay. Have you seen -- have you seen this document before?

2:15-cv-01045-RFB-PAL

1 **A.** (Pause.)

2 MR. DAVIS: And you can look on your screen.

3 (Fire alarm goes off.)

4 (Recess taken at 3:13 p.m.)

5 (Resumed at 4:05 p.m.)

6 MR. DAVIS: Your Honor, I've been informed that I have
7 a hard stop at 4:30. Is that right?

8 THE COURT: Yes.

9 MR. DAVIS: For today, for today. Just for today.
10 Okay. Thank you.

11 THE COURT: Well, unless you think you can do it up to
12 4:45, I mean, because that's about how much time you'd have. I
13 will give you that additional time.

14 MR. DAVIS: I think if I -- if I have until 4:45, I can
15 get through my cross-examination.

16 THE COURT: Okay. Perfect. I'm sure Professor Oyer
17 would appreciate that.

18 THE WITNESS: I will be very happy.

19 THE COURT: All right. So we're back on the record,
20 and we're going to do our cross.

21 Mr. Davis?

22 MR. DAVIS: Thank you, Your Honor. If I might have
23 just a moment?

24 THE COURT: Sure.

25 MR. DAVIS: I grabbed everything because I was afraid I

2:15-cv-01045-RFB-PAL

1 would lose it.

2 BY MR. DAVIS:

3 Q. Okay. So --

4 **A.** I'm sorry, I'm just making sure my phone is off. I didn't
5 do that properly.

6 THE COURT: That's okay.

7 THE WITNESS: My mistake. We're good.

8 MR. DAVIS: That's okay. I have a similar relationship
9 with technology. I was half-convinced that I had pressed the
10 fire alarm button on the ELMO, and that was what precipitated
11 everything, so ...

12 BY MR. DAVIS:

13 Q. Okay. Let's take a look at -- this is -- I don't know if
14 you can see it on here, but that is your slide 15.

15 Does that look right to you?

16 **A.** Yes.

17 Q. Okay. And in regard to your slide 15, this is the -- this
18 is John Howard a/k/a John Wilson a/k/a John Smith. And he's one
19 your fighters that you identified.

20 Now, one of the things you said about these two events,
21 I think, is you drew the inference that he was probably higher
22 on the card at the first event, UFC Fight Night 59, than at UFC
23 189, if I recall your testimony correctly. Is that right?

24 **A.** I speculated that, yes.

25 Q. You speculated that. And what was the basis for your

2:15-cv-01045-RFB-PAL

1 speculating that?

2 **A.** I -- I would just guess that that is the case given what we
3 know here.

4 THE COURT: Is that based on the proximity in time?

5 THE WITNESS: What?

6 THE COURT: Was that based on the proximity --

7 THE WITNESS: One is a much lower event revenue, and so
8 I'm guessing that he's lower on the card. He's higher up on the
9 card in that event.

10 THE COURT: In which event, just so we're clear?

11 THE WITNESS: The top one.

12 BY MR. DAVIS:

13 Q. Right. So, in other words -- I just want to make sure I
14 understood your reasoning. So, in other words, if John Howard
15 is in an event with a lot less revenue, the inference you would
16 draw is that he's probably higher on the card. The other
17 prominent fighters are not. And then when it's \$30 million of
18 revenue, the reverse is probably true. That's the inference you
19 did, in fact, draw?

20 **A.** I'm sorry I drew it. It's completely irrelevant to anything
21 we're discussing.

22 Q. But it is an inference you did, in fact, draw?

23 **A.** Again, I stated it.

24 Q. You did state it.

25 Okay. And so couple of things I want to ask you about

2:15-cv-01045-RFB-PAL

1 that. The first one is, now, the wage share you calculated
2 here -- or I think it's called "fighter compensation share" --
3 let me start that over.

4 Fighter compensation share and wage share mean the same
5 thing in this context, right?

6 **A.** Yes.

7 **Q.** Okay. So the wage share that you've calculated does not
8 control for the other fighters who appeared at the event, right?

9 **A.** That's --

10 MS. GRIGSBY: Objection. Misstates his testimony.

11 THE COURT: Overruled. Go ahead.

12 BY MR. DAVIS:

13 **Q.** I'm asking you the question.

14 **A.** The event compensation number there, if you take the log of
15 it, it's the left-hand side variable in my equation. If you
16 just take the fighter compensation share there, that's the
17 left-hand side variable in Dr. Singer's regression.

18 **Q.** Oh, I see. So you're using Dr. Singer's regression analysis
19 here to generate these particular wage shares?

20 **A.** I'm -- yes.

21 **Q.** Okay.

22 **A.** I'm using his data.

23 **Q.** Good. I just wanted to make sure I understood what it was
24 you were doing.

25 All right. Let's take a look at ...

2:15-cv-01045-RFB-PAL

1 And this is this is slide 8, correct?

2 **A.** I can't read it, but ...

3 **Q.** Okay. I think you may be able to see --

4 **A.** It's one of my slides.

5 **Q.** Okay. It's one of your slides and you have no reason to
6 believe it's not slide 8. Fair enough.

7 And on the right-hand side is your regression using the
8 log of compensation. Is that -- is that right?

9 **A.** Yes.

10 **Q.** Now, that regression does not control for event revenues.
11 Is that right?

12 **A.** Yes.

13 **Q.** Okay. Just wanted to make sure of that as well. Okay.

14 **THE COURT:** And why not? Why did you make that
15 particular choice, in your view?

16 **THE WITNESS:** Well, because the simplest thing I
17 thought to do was just to take Dr. Singer's regression and run
18 what I considered the correct regression, which is a log wage
19 regression using the same explanatory variables.

20 **THE COURT:** Okay. So you don't know from your own
21 regression analysis whether or not event revenue would have had
22 a significant -- statistically significant impact in that
23 particular model that you ran because it wasn't in there?

24 **THE WITNESS:** Well, I know it from Professor Topel's
25 report.

2:15-cv-01045-RFB-PAL

1 THE COURT: But I'm saying from your own.

2 THE WITNESS: I don't remember whether I ran that
3 regression or not.

4 THE COURT: Okay. All right.

5 THE WITNESS: And it's irrelevant because it gives
6 exactly the same implications if you include event revenue as a
7 control variable.

8 THE COURT: Why is that? Whether or not it's
9 statistically significant or not is irrelevant; why?

10 THE WITNESS: Oh, because -- well, all we care about --
11 all we care about in terms of drawing inferences regarding this
12 case is the foreclosure share coefficient.

13 So, you know, we care about win flag for all of the
14 reasons we discussed -- and apparently it's so exciting it set
15 off alarms. But we care about win flag for various reasons.
16 But the only -- the only coefficient we really care about here
17 is foreclosure share.

18 And so the foreclosure share coefficients are -- are
19 economically and statistically insignificant in my regression
20 whether I include revenue as a control variable or not.

21 THE COURT: Okay.

22 THE WITNESS: So that's what I meant by it's irrelevant
23 whether we control for revenue because it doesn't affect the
24 inference you draw in foreclosure.

25 THE COURT: Okay.

2:15-cv-01045-RFB-PAL

1 BY MR. DAVIS:

2 Q. Okay. Now, in your report, you opined that there's no
3 literature of which you were aware in the academic community
4 that accepts use of labor share as a proper basis for measuring
5 how monopsony power affects compensation, correct?

6 **A.** If you want me to verify that -- if you're reading from a
7 report, I will believe you. I will believe you.

8 Q. Okay.

9 THE COURT: Is that your view?

10 THE WITNESS: That is my view.

11 THE COURT: Okay.

12 BY MR. DAVIS:

13 Q. Okay. That is your view. Good.

14 But at deposition you admitted that you had never
15 written a publication that assessed the effect of monopsony
16 power on the compensation of professional athletes, correct?

17 **A.** If you want me to -- I won't take issue with the question.
18 I don't remember being asked that at the deposition.

19 Q. Have you ever written a publication that assessed the effect
20 of monopsony power on the compensation of professional athletes?

21 **A.** No, I have not.

22 Q. Okay. And you didn't cite to any publications that used
23 wage level as a measure of the marginal revenue product of
24 professional athletes, correct?

25 **A.** Well, I -- did I not talk about Scully?

2:15-cv-01045-RFB-PAL

1 Q. You did not.

2 A. Okay.

3 Q. And, in fact, in deposition you admitted that you had -- did
4 not cite to any such thing.

5 A. Okay. Then I did not.

6 Q. And you didn't cite to any publication that rejects use of
7 wage share in assessing the affect of monopsony power on
8 compensation in sports, correct?

9 A. There are -- there are no -- there are no papers that
10 suggest using it in the way Dr. Singer has used it so nobody has
11 rejected it.

12 Q. You qualified your answer just then in a way that Dr. Singer
13 has used it. I'm not qualifying it in that way. I'm saying
14 generally that you actually have not identified any publication
15 that rejects use of wage share in assessing the effects of
16 monopsony power on compensation in sports however it's used. Is
17 that fair?

18 A. Did -- are you saying you asked me that -- are you asking if
19 you asked me that at the deposition or are you asking me now?

20 Q. I'll ask you now. Have you cited to any such publication?

21 A. No.

22 Q. Are you aware of any such publication?

23 A. No, they don't exist.

24 Q. They don't exist. Okay.

25 So at your deposition do you recall that I put before

2:15-cv-01045-RFB-PAL

1 you the 2004 Scully article, *Player Salary Share and the*
2 *Distribution of Players Earnings*?

3 **A.** Vaguely.

4 Q. You do -- you recall that vaguely.

5 And I asked you to review that article at the
6 deposition. Do you recall that?

7 **A.** No.

8 Q. Okay. Do you recall whether you admitted that Professor
9 Scully appeared to use wage share in his analysis?

10 **A.** I don't recall any discussion of Scully's paper from my
11 deposition. That was a long time -- that was a very long time
12 ago.

13 Q. Okay. Why don't we look at the testimony.

14 So you -- and I believe you have a copy of your
15 deposition. Is that correct?

16 **A.** Do I?

17 THE COURT: Let's hope so.

18 MR. DAVIS: If not, we will happily provide you one.

19 THE WITNESS: Yep, I do.

20 BY MR. DAVIS:

21 Q. Very good. So I'm looking at page 103 of your deposition
22 and starts at line 19.

23 And I asked the question: "It fair to say that
24 Professor Scully is analyzing professional athlete compensation
25 using what we have called wage shares?"

2:15-cv-01045-RFB-PAL

1 And what was your response? If you would read it out
2 loud.

3 THE COURT: He doesn't need to read it out loud. I can
4 read it.

5 MR. DAVIS: Okay. My apologies.

6 THE COURT: If you want, Professor Oyer, you can read
7 it to refresh your recollection about what you said. It's a
8 little hard to read these things because the way that the pages
9 work out.

10 THE WITNESS: Yeah, I can see it in front of me.

11 BY MR. DAVIS:

12 Q. Okay. We'll cut to the chase.

13 On page 104, line 9 I say: "Does he appearing to be
14 using wage shares in his analysis?"

15 And you say: "I believe that's what he's doing."

16 Does that refresh your recollection at all?

17 **A.** Not really. But I believe you that he did that and that I
18 said that because ...

19 Q. Okay.

20 THE COURT: Do you have any reason to doubt that that's
21 true?

22 THE WITNESS: Absolutely not.

23 THE COURT: Okay.

24 BY MR. DAVIS:

25 Q. Okay. Very good.

2:15-cv-01045-RFB-PAL

1 And we went through a similar process, if you may
2 recall, with the -- or you may not recall, as it turns out, with
3 Professor Kahn and his article, *The Sports Business As A Labor*
4 *Market Laboratory*.

5 **A.** Yes, I do. I remember that one explicitly because, as I
6 remember, you tried to get me to focus on wage share, but that
7 article has for every discussion of wage share a similar
8 discussion of wage levels.

9 **Q.** Okay. And do you recall that I asked you whether he used
10 wage share in analyzing the effects of anticompetitive conduct
11 on player compensation? Do you recall whether I asked that?

12 **A.** Yes, I recall that one.

13 **Q.** And do you recall that you answered that he did?

14 **A.** I don't. But I'll believe you that it's in here.

15 As I think back to it, I'm not sure that's how I would
16 have characterized, but this has been a while so --

17 THE COURT: Why don't you show him the portion of his
18 deposition.

19 MR. DAVIS: Why don't I do that. That would be great.

20 THE WITNESS: Just tell me where, I've got it right
21 here.

22 THE COURT: He can grab some context.

23 BY MR. DAVIS:

24 **Q.** Okay. Page 109. The question is: "Are you aware that in
25 particular Professor Kahn is analyzing the effects of

2:15-cv-01045-RFB-PAL

1 anticompetitive conduct on player compensation using wage
2 shares?"

3 And your response was: "Among other -- he is using
4 wage share among other means of -- among other methods and
5 measures, sure."

6 Does that refresh your recollection at all?

7 **A.** Not really, but okay. I'm sure I said that.

8 **Q.** Okay. Let's look at another example. It would be John
9 Vrooman, *The Theory of the Perfect Game Competitive Balance in*
10 *Monopoly -- Monopoly Sports Leagues.*

11 Do you recall the testimony about Dr. Vrooman's article
12 at all?

13 **A.** So I don't recall testimony about that article.

14 What I recall is in the deposition the attorney put a
15 litany of papers in front of me, and each one of them used the
16 term "wage share." And I admitted that I had not cited to them.
17 And there are several reasons I hadn't cited to them. One is
18 they're not incredible journals. They're not something a labor
19 economist would read. They weren't -- they're not papers that
20 would be submitted to the journals I read or to the journal I
21 edit. So it's not a literature I know. It's not a literature
22 to which Dr. Manning has cited. It's not something that labor
23 economists read or do.

24 So they used the term "wage share." They used that
25 term, and they sometimes show you what the wage share is. Not

2:15-cv-01045-RFB-PAL

1 one these papers does anything close to what Dr. Singer did or
2 in any way other than using the term "wage share" is somehow
3 indicative that it's something we should do and, therefore, Dr.
4 Singer should do it.

5 It's just -- the term "share" is out there. In the --
6 in my -- in my -- in my deposition there are places where I have
7 used the word "share" when writing articles that have nothing to
8 do with anything we're talking about today. So, sure, shares,
9 wage shares, these terms are out there. It's not relevant.

10 Q. So I just want to be very clear about this. Your claim is
11 that these articles don't actually use wage share, they just use
12 the term "wage share." Is that your position?

13 **A.** No, these articles -- sorry for cutting you off. Sorry
14 about that. Were you finished?

15 Q. No, please.

16 **A.** They use wage share. They calculate wage share. They
17 don't -- they do it at a league-wide level, if I remember
18 correctly. And there's nothing that -- in any way has remotely
19 similar empirical validity.

20 There's nothing in those articles that gives empirical
21 validity to Dr. Singer's approach, which is for other reasons
22 having nothing to do with any of this invalid.

23 Q. So, but they nonetheless do, in fact, use wage share. And
24 you had originally said that you were unaware of any literature
25 that uses wage share to assess the affects on -- of monopsony

2:15-cv-01045-RFB-PAL

1 power on the compensation of athletes. That is what you had
2 said, right?

3 **A.** Well, I was not aware of these papers until they were
4 brought to my attention at deposition. There is no reason I
5 would have been. And they have no bearing whatsoever on my
6 opinion.

7 Q. Do you --

8 THE COURT: Hold on a second, Mr. Davis.

9 Is part of that because you don't specialize in doing
10 work in the sports labor market? Have you written any papers at
11 all in this particular area in the past 10 or 15 years
12 regarding, sort of, competitiveness in the labor market in the
13 sports field?

14 THE WITNESS: No, I haven't. I've written on -- and
15 sports never to do with competitiveness in the labor market.

16 THE COURT: Okay. And so this -- and, again, the
17 journal that you edit focuses on what types of market analysis?
18 Is it a particular industry or is it just that it doesn't
19 necessarily include the sports literature?

20 THE WITNESS: So it's called the *Journal of Labor*
21 *Economics*. It is the leading economics journal in the labor
22 economics field. I'm an editor -- I'm the Editor-in-Chief.
23 Professor Manning used to be one of the editors of this journal.
24 Professor Topel also used to be one of the editors of this
25 journal. It's the leading field journal in labor economics. It

2:15-cv-01045-RFB-PAL

1 publishes sports papers.

2 I published -- I was the editor of one that we
3 published recently about NBA compensation. So sports papers are
4 submitted to this journal all the time.

5 I don't know -- I have no idea whether any of these
6 papers were submitted that have been shown to us were submitted
7 to my journal. They were -- they would not have been published
8 in it.

9 THE COURT: Okay. Thank you.

10 MR. DAVIS: Thank you, Your Honor.

11 BY MR. DAVIS:

12 Q. In terms of the dispute between wage share and wage level,
13 am I correct that it is your position that labor share is never
14 an appropriate benchmark for competitive pay?

15 A. Again, I'm -- I'm not going to say "never," for exactly --

16 Q. Right.

17 A. Dr. Manning and I are both somewhat conservative. Even
18 people from New Jersey can be understated, so I'm not going to
19 say "never" either. But it is -- I have not seen a situation
20 where it would be appropriate to run the types of analyses Dr.
21 Singer used.

22 Q. Okay. And so that means --

23 THE COURT: Excuse me, Mr. Davis. I just want to
24 clarify this.

25 So, that is based in part upon your assumption that

2:15-cv-01045-RFB-PAL

1 there isn't a direct relationship between how fighters are
2 compensated and event revenue? Because if there wasn't an
3 explicit term, then there would be no way you could say that
4 wage share wouldn't at least be some function of the
5 compensation, right?

6 THE WITNESS: So, I think as I -- as I mentioned during
7 my earlier testimony, one thing that Dr. Manning and I and a lot
8 of labor economists would agree on is if we could ever measure
9 marginal revenue product we would be thrilled.

10 THE COURT: Right.

11 THE WITNESS: It would advance the literature and our
12 ability to spot monopsony in incredible ways.

13 I have no reason to think that -- I can't think of a
14 situation where we'd get closer to that gold standard than we
15 currently are by using labor share.

16 THE COURT: But what I'm saying is, if you had a market
17 in which contracts were explicitly based on event revenue, would
18 that not then be a market in which wage share would be an
19 appropriate measure? I'm not saying we have that here.

20 THE WITNESS: Yeah, I understand.

21 THE COURT: But what I'm trying to understand, sort of,
22 the theoretical argument you're making, and it seems to me that
23 it assumes -- because we don't have information -- that you
24 shouldn't use wage share unless there's some basis for
25 connecting the event revenue to the compensation. And from --

2:15-cv-01045-RFB-PAL

1 and what I take from that is you saying you're not ruling it
2 out, but there's no information that would suggest that, in
3 fact, there is this connection. And if there's no information
4 to suggest that there is this connection, that it wouldn't be
5 appropriate.

6 So then my sort of hypothetical to you is, if, in fact,
7 there was information that suggested event revenue was
8 explicitly tied to a fighter's compensation, would wage share in
9 that instance be an appropriate potential metric?

10 THE WITNESS: Yeah, that's the I don't want to say
11 "never" because there could be a situation I'm not thinking of
12 where that would apply. It doesn't apply here. But there --
13 there could be such a situation. I don't know. I can't rule
14 that out for sure.

15 THE COURT: Okay.

16 BY MR. DAVIS:

17 Q. And it doesn't apply here to any of the fighters, is your
18 position?

19 A. It does not apply to the fighters in a way that we can apply
20 using -- I'm only commenting on Dr. Singer's regression and
21 whether it applies there.

22 Do you want me to go back and think about whether it
23 applies to Conor McGregor or not?

24 Q. No --

25 A. I wasn't asked to do that.

2:15-cv-01045-RFB-PAL

1 Q. Okay. You were not asked to do that and you're not offering
2 an opinion on that issue?

3 **A.** I'm offering an opinion that it's not relevant to the group
4 as a whole that we've been looking at, and there's no way it
5 makes sense to do the types of analyses Dr. Singer has done.

6 Q. Okay. Switch topics slightly.

7 In your expert report, you asserted that labor
8 economists start from the basic principle that in a competitive
9 labor market a firm will be willing to pay a worker up to the
10 marginal revenue product of that worker's labor. Is that your
11 opinion?

12 **A.** Yes.

13 Q. Okay. And I think you clarified at deposition -- and I take
14 this as a friendly amendment -- that they're always willing to
15 do that. It's just in a competitive market they have to pay up
16 to the marginal revenue product of labor. Is that -- is that
17 fair?

18 **A.** That, I do remember. Yes.

19 Q. Okay. Good.

20 And so, built into that principle, is that a firm would
21 not deliberately pay its workers more than their marginal
22 revenue product of labor. Is that correct?

23 **A.** I think that's right.

24 Q. Okay. And so even if we're looking at, for example, a
25 sports league with a union and the union confers some sort of

2:15-cv-01045-RFB-PAL

1 bargaining power on the athletes, we still would expect that the
2 amount of compensation that the athletes would receive would not
3 exceed their marginal revenue product of labor, that follows,
4 correct?

5 **A.** Are you talking about the athletes as a group or
6 individually?

7 **Q.** As a group.

8 **A.** I would say that's right.

9 **Q.** Okay. And -- and those athletes -- and, therefore, at most
10 the compensation they would receive would be as a group their
11 marginal revenue product of labor?

12 **A.** Yes.

13 **Q.** All right. Thank you.

14 Now, in your report -- oh, I think we covered this --
15 you modified Dr. Singer's regression, but you didn't include
16 event revenues as an independent variable in your version of the
17 regression. Is that right?

18 **A.** That's right.

19 **Q.** Okay.

20 Now, at your deposition we discussed so-called nascent
21 sports. Do you recall that at all?

22 **A.** I don't.

23 **Q.** Okay. Maybe I can refresh your recollection. Let me find
24 your ...

25 So I am looking at page 172. 172 of your deposition.

2:15-cv-01045-RFB-PAL

1 And starting on line 4 I asked you: "Let's start with the
2 nascent business explanation." We're talking about whether wage
3 shares -- wage share varies by different sport. "Is it your
4 opinion that, all else equal, if the league is earlier in its
5 development, it would be expected to pay a lower share of its
6 revenue to its fighters than it would pay as it matures?"

7 And you said: "Not necessarily."

8 I said: "Not necessarily. So it's possible that you
9 have it exactly backwards that nascent sports businesses pay a
10 higher share of revenue so that the major sports are a
11 conservative benchmark in this regard?"

12 You said: "That's empirically not true, right. So I
13 don't think that -- I don't think I have it exactly backwards
14 like as a general rule or something. I don't think we know the
15 general rule. I think we can't make a comparison about how
16 things get done in a nascent sport versus a non-nascent sport
17 for lack of a better way of saying it."

18 So it was your opinion, then, that there is no general
19 rule about whether nascent sports pay higher wage share or lower
20 wage share than more mature sports. Is that fair?

21 **A.** Yeah, I haven't studied it so I don't know.

22 **Q.** Okay. So you have no opinion on that?

23 **A.** That's correct. Well -- yeah.

24 **Q.** Okay. You earlier today stated that you thought labor
25 economists would agree with you about whether or not wage share

2:15-cv-01045-RFB-PAL

1 is appropriate to use in the way that Dr. Singer uses it. Is
2 that correct?

3 **A.** I don't remember saying that today.

4 **Q.** You don't remember saying that -- you don't remember saying
5 that you were confident that labor economists would have a
6 similar view to yours rejecting that approach?

7 **A.** What I think I said earlier today was -- and correct me if
8 I'm wrong, because I don't have the transcript. If -- I believe
9 what I said was that if Dr. Singer submitted that paper to the
10 journal I edit, it would be rejected.

11 **Q.** Yeah. You -- I think you also said that -- you did say a
12 separate team, but that's okay.

13 Do you recall at your deposition that you also made
14 predictions about which labor economists would agree with you on
15 your position about wage share?

16 **A.** I do.

17 **Q.** You do. Do you recall that you identified Professor Manning
18 as particularly authoritative on monopsony power?

19 **A.** I do.

20 **Q.** You do. And that his work -- his book, *Monopsony in Motion*,
21 and his chapter on monopsony power and its effects in, I think,
22 the *Handbook of Economics -- Labor Economics* were particularly
23 authoritative. Do you recall that as well?

24 **A.** I think the book is excellent. I mean, I've cited it
25 frequently because I think it makes our case very nicely for us.

2:15-cv-01045-RFB-PAL

1 Q. Okay. And Professor Manning, whom you -- you heard
2 Professor Manning testify earlier today as well?

3 **A.** I did.

4 Q. And Professor Manning, who you identified as particularly
5 authoritative and an expert and leader on monopsony power and
6 labor market, disagrees with you about wage share. Is that fair
7 to say?

8 THE COURT: I think it's fair to say. Obviously
9 they're competing experts.

10 BY MR. DAVIS:

11 Q. So it is at least conceivable that your prediction about
12 other labor economists might be mistaken as well. That's my
13 last question on cross-examination.

14 THE COURT: Well, I don't think that's really a
15 question, obviously.

16 MR. DAVIS: I don't think it was either. I think it's
17 rhetorical.

18 THE COURT: I think it's a statement.

19 MR. DAVIS: So I have no further questions on
20 cross-examination, Your Honor.

21 THE COURT: So, Professor Oyer, I just have a couple
22 follow-up questions. And it really goes to this issue of the
23 use of wage share or not and relates to two separate issues.
24 The first is, if you wanted to try to figure out how event
25 revenue contributed to marginal revenue product, how would you

2:15-cv-01045-RFB-PAL

1 measure that?

2 THE WITNESS: If I wanted to figure out how event
3 revenue --

4 THE COURT: In this industry, right.

5 THE WITNESS: If I wanted to figure out how event
6 revenue contributed to marginal revenue product --

7 THE COURT: So I'm sorry. So I'm sorry. So I'm sorry,
8 I should that that back. The relationship between a particular
9 fighter's revenue -- marginal revenue product -- the
10 relationship between that and event revenue, how would you
11 assess that?

12 In other words, if you really wanted to figure out if,
13 in fact, a particular fighter's marginal revenue product
14 impacted event revenue, all right, and if their -- how would you
15 first test that?

16 THE WITNESS: So, I don't think there's an easy answer
17 to that. So I would start by going back and doing some very
18 simple -- I'd start in Excel here. I wouldn't get fancy.

19 So I don't know exactly how to do that, but I think our
20 first -- the first thing I would say -- and it comes back to
21 what -- one of the questions before is let's start with an
22 outlier and see how that works. So I might try Conor
23 McGregor -- Conor McGregor, the only UFC fighter I've ever heard
24 of.

25 THE COURT: Right.

2:15-cv-01045-RFB-PAL

1 THE WITNESS: So I keep saying him, but we could pick
2 another headliner and do the same thing. And I might try to
3 look at how revenues are related, how that person's being in or
4 not in a fight is related. But, boy, this is, off the cuff,
5 going to be a difficult thing. I would -- I would start by
6 calling together -- what I would do, to be honest, I would try
7 to get a couple of other labor economists to sit down with me
8 and figure this out; possibly Alan; possibly others.

9 THE COURT: But if you had to do it on your own, if you
10 had to do it on your own, right, what would you do?

11 THE WITNESS: So I'd start by looking at some graphs.
12 I would do -- actually, I would do two graphs. My new friend,
13 John Howard, and my -- and Colin -- Conor McGregor, and I would
14 look at the -- how -- I would just map -- I would just draw -- I
15 don't know if it would be a line graph. I'm trying to think how
16 I would do this. Probably just a scatter plot of bare revenue
17 for each of them, and they would be very different, of the
18 revenue in their fight versus how much -- how much they were
19 paid that night. But, God, that doesn't even tell us anything.
20 I need -- I need -- I need more time.

21 MR. DAVIS: Your Honor, I just for -- I actually do
22 have a couple more questions. Whenever you're done, if I could
23 just have a few more minutes. I apologize. The fire alarm was
24 a little bit disruptive.

25 THE COURT: No, that's all right.

2:15-cv-01045-RFB-PAL

1 Because, again, part of my task here, Professor Oyer,
2 is to figure out in a situation in which you don't have clear,
3 direct benchmarks -- a -- for example, a non allegedly sort of
4 challenge of monopsonistic market to do this, is it reasonable
5 to do what they did in the absence of having a perfect system?
6 And that's why I'm asking you, if had you to do this, why
7 wouldn't you -- why wouldn't you use some of these same measures
8 if you believed that there was a relationship between a
9 particular fighter's marginal revenue product and event revenue,
10 what would you do that would be different than what they did?

11 THE WITNESS: I guess I -- I guess -- just because
12 there's a relationship, doesn't mean that's the focus. There
13 could be a relationship between that. There is a relationship
14 between the person's marginal revenue product of labor and many
15 things on the right-hand side of our regression. But I don't
16 think revenue should be the focus of that -- of -- like, I don't
17 see it -- we're getting trapped because Singer said let's think
18 about share, and all of a sudden the focus is on the
19 relationship between marginal product of labor and revenue.

20 THE COURT: But I'm saying that --

21 THE WITNESS: That's not the baseline from which I'd
22 even start.

23 THE COURT: So I'm saying that because in this record
24 there is, in fact, testimony of other witnesses who say that
25 they've looked at, for example, event revenue and fighter share.

2:15-cv-01045-RFB-PAL

1 I mean, there are -- you haven't seen all of this or maybe you
2 have. There are actually different pieces of the record that at
3 least suggest that that's something that people looked at.

4 THE WITNESS: Uh-huh.

5 THE COURT: And you're not disputing, I don't think,
6 the fact that there is some relationship potentially between a
7 fighter's marginal revenue product and event revenue, and it
8 seems to me part of what you are talking about discussing and
9 struggling with as relates to what they did is how they went
10 about trying to sort of quantify that relationship. But the
11 question is, do you have a better way to do it?

12 THE WITNESS: Yes, I do. And it's Table 1 of my -- of
13 my report. Because, there, we have in mind, again, the but
14 for -- the but-for regression. That gives us -- if we -- again,
15 I'm going to rely on the foreclosure share. That gives us what
16 would be the -- what would be -- in the absence of some
17 foreclosure share, what would be the pay of the fighters and --

18 THE COURT: I'm sorry. In that regression, did you
19 have event revenue?

20 THE WITNESS: I did. And so I can add it -- if I
21 really want to know about revenue, we can add it and we know the
22 relationship there.

23 THE COURT: So what you would do is -- you were saying
24 you might do something which you think Dr. Topel did, which
25 would be you would do like an absolute level of compensation and

2:15-cv-01045-RFB-PAL

1 then you would put on the right side of the equation some
2 measure for event revenue?

3 THE WITNESS: Uh-hmm. Yes. The other thing -- I mean,
4 the other thing I would do -- when I started this case, the
5 first thing you would do is you would look at just over time
6 draw some graphs about the relationship between fighter pay,
7 foreclosure share, revenue, and those sorts of things.

8 And what you find in all of those is that during the
9 period of contested -- what's the term here?

10 THE COURT: Challenged conduct.

11 THE WITNESS: Challenged conduct. I'm sorry, I knew it
12 was two Cs.

13 THE COURT: That's all right.

14 THE WITNESS: During the period of challenged conduct,
15 pay -- even labor share, if I remember correctly, is going up or
16 it's not going down.

17 So, you know, I would have started with some simple
18 graphs. I don't remember if any of those graphs included
19 revenue directly.

20 THE COURT: Right.

21 THE WITNESS: But I would start with that kind of
22 analysis. Let's see how, as revenue went up, what happened with
23 pay.

24 THE COURT: Right.

25 THE WITNESS: I think if you do that, you're just not

2:15-cv-01045-RFB-PAL

1 going to see -- there's nothing that jumps out at you and says,
2 oh, my God, look. They're being -- they're really taking
3 advantage of these guys starting at this point. There's just
4 nothing in the data to suggest that.

5 THE COURT: So what would you have to see to see that?
6 What would be the level?

7 So let's say, for example, at a particular -- because
8 it seems to me it's about degrees really. It's not about
9 absolutes. So if you say, for example, obviously if fighters
10 are getting pay \$10 and the event revenue was \$10 million, you
11 would, I think, agree that that obviously wouldn't be an
12 appropriate wage. And even if the wage is going up from \$5 or
13 whatever to \$20, obviously the increase in the absolute wage
14 could potentially still not take into consideration the exercise
15 of monopsony power, right?

16 THE WITNESS: I agree.

17 THE COURT: So, again, part of the issue for me is,
18 okay, if you acknowledge that the increase in the absent
19 compensation is not necessarily in and of itself an -- an
20 indication of procompetitive conduct, what is the other measure
21 to figure out what would be then the difference between what the
22 absolute wage is and what the marginal revenue product is that
23 would bring it up to the competitive wage? How would you model
24 that in that context?

25 THE WITNESS: You're going to call me a broken record,

2:15-cv-01045-RFB-PAL

1 but I'm going to come back to Table 1 of my regression, with or
2 without revenue as an explanatory variable.

3 THE COURT: Okay.

4 THE WITNESS: That's the way we analyze these things.
5 And we'd have to --

6 THE COURT: Yes, but what I'm saying your model doesn't
7 seem to take into consideration at least the potential argument
8 the absolute wage itself is so suppressed by monopsony power
9 that even the increase doesn't get you up to the marginal
10 revenue product, right? Your model doesn't account for that,
11 does it?

12 THE WITNESS: I think it does.

13 THE COURT: But how?

14 THE WITNESS: If we believe the foreclosure share
15 variable that Dr. Singer put together, it gives us the
16 counterfactual in a world where there's no monopsony power,
17 subject to the linearity assumption about foreclosure share --

18 THE COURT: Right.

19 THE WITNESS: -- and some other limits that -- but at a
20 first pass, none of that matters because in -- when you run the
21 regression the way I think you should, the variable isn't even
22 negative much less negative and statistically significant. You
23 might say --

24 THE COURT: I'm sorry. When you say "the variable,"
25 you're talking about the foreclosure share?

2:15-cv-01045-RFB-PAL

1 THE WITNESS: The coefficient of the foreclosure share.

2 THE COURT: Of the foreclosure share, right.

3 Okay. Thank you, Professor.

4 MR. DAVIS: Thank you, Your Honor. Just a couple of
5 last questions and then --

6 THE COURT: Okay. Five minutes.

7 MR. DAVIS: Five minutes it is.

8 CONTINUED CROSS-EXAMINATION OF PAUL OYER

9 BY MR. DAVIS:

10 Q. Just before the fire alarm went off and causing -- I had put
11 this slide up. You had said you had seen no evidence of
12 proportionality or you were aware of no evidence in this case of
13 proportionality.

14 You confirmed, I believe, that that was your position.
15 And I asked if you had seen this internal WME document assessing
16 the acquisition of Zuffa. Have you -- had you seen this
17 document?

18 A. For the record, I didn't pull the fire alarm to avoid
19 answering this question.

20 Q. Fair enough. Had you seen it?

21 A. I saw -- when you put it up, I saw it this morning because I
22 got a copy, an advanced copy, of Dr. Manning's slides.

23 Q. Okay. But not before then?

24 A. I don't recall having seen it. I'm not going to tell you I
25 haven't. I've seen a lot of stuff.

2:15-cv-01045-RFB-PAL

1 Q. Sure. Now, if you look at this it says -- this is an
2 internal analysis: "We believe our long-term 20 percent of
3 revenue assumption is reasonable."

4 Do you see that? It's the last line at the top where
5 WME is forecasting -- describing the forecast of event revenues
6 and of fighter compensation.

7 **A.** I see it.

8 Q. Okay. And do you see that the estimate beginning in 2016
9 through 2020, their own internal estimate, has a wage share that
10 stays constant at 20 percent?

11 **A.** I see it.

12 Q. You do see that. And so that -- their own internal document
13 was using, for business purposes, the very proportionality that
14 we are discussing. Is that fair?

15 **A.** No. I wouldn't call this -- this doesn't tell you -- the
16 proportionality was about the -- the proportion -- no,
17 absolutely not. I think you're completely misrepresenting how
18 this relates to the proportionality discussion.

19 Q. They -- are you saying that they are not saying that you
20 have a consistent relationship between fighter compensation and
21 event revenue measured by wage share?

22 **A.** The proportionality assumption is about the relationship
23 between the marginal product of labor and event revenue.

24 Q. So that -- that is a different definition of
25 proportionality?

2:15-cv-01045-RFB-PAL

1 **A.** Oh, it's the definition that Alan is using in his test.

2 **Q.** That actually -- okay.

3 **A.** Excuse me, Professor Manning.

4 **Q.** That's Professor Manning.

5 So that -- please, what I would ask is, let's take
6 turns, if you don't mind.

7 **A.** Fair enough.

8 **Q.** And if I interrupt you, I apologize. So please avoid.

9 So I just want to be clear. So your testimony is
10 premised that on the -- on the proportionality with marginal
11 revenue product, not between fighter compensation and event
12 revenues?

13 **A.** My -- that's correct.

14 **Q.** Okay.

15 **A.** Yes, that's correct, because that's what's written in
16 Dr. Manning's report.

17 **Q.** And have you seen this document before?

18 **A.** I do not remember having seen this document before.

19 **Q.** Okay. So this is --

20 THE COURT: Well, let me ask this question. Would it
21 matter to you, Professor Oyer, in terms of your analysis if you
22 were able to confirm that, in fact, Zuffa or UFC used wage share
23 as a way to set compensation? Would that change some of your
24 opinions today?

25 THE WITNESS: No. So, let's be clear about a couple of

2:15-cv-01045-RFB-PAL

1 things.

2 THE COURT: I'm saying so if they -- if they internally
3 said we don't want to ever be in a situation -- and I'm not
4 saying this is what happened -- where we compensate someone more
5 than 20 percent of the event revenue, and they used that
6 themselves as a way to try to set the compensation, you're
7 saying that doesn't matter either?

8 THE WITNESS: No, that doesn't matter at all. That's
9 an internal -- how they budget and so forth. That's between --
10 that doesn't tell us anything.

11 THE COURT: But why wouldn't --

12 THE WITNESS: I --

13 THE COURT: Hold on. But let me press you on that.

14 If they're using that themselves to determine
15 compensation, why then would wage share not matter if they,
16 themselves, are using that same metric? Why should I disregard
17 their use of it when, in fact, that's part of how they view it
18 and part of how they make the decisions if that's established?

19 THE WITNESS: So I think that's a fair question, but
20 there's a very straightforward answer.

21 Would you grant me that many companies out there do not
22 have monopsony power over their workers?

23 THE COURT: Well, sure.

24 THE WITNESS: Many companies budget their employee pay
25 as a share of revenue. When they start doing their business

2:15-cv-01045-RFB-PAL

1 planning, it's an important factor.

2 Stanford University -- I don't know if they do -- if
3 they look at -- they certainly look at my pay and I don't --
4 it's a bad example, because I have no idea. I'll -- whether
5 they plan it that way.

6 But many companies plan, oh, what's our -- what's our
7 HR spend going to be --

8 THE COURT: Right.

9 THE WITNESS: -- as a fraction of revenue.

10 THE COURT: So you're saying that we shouldn't conflate
11 a company looking at essentially the cost of labor with a
12 compensation model based upon event revenue?

13 THE WITNESS: Definitely not. I mean, I might also add
14 that in this -- in what you have --

15 MR. DAVIS: I would like to actually ask a question
16 about this before you testify about it, if I may.

17 THE WITNESS: Well, no, on the last graph you showed me
18 that it's constant. So I don't understand -- like, even if --
19 even if you took it as evidence -- like, even if you thought
20 they were imposing monopsony power, why is the wage share going
21 up and certainly not going down during the period where the --
22 where the -- where the conduct is going on. But anyway --

23 BY MR. DAVIS:

24 Q. No, let me answer this question since -- this is a reverse
25 role, but I'll just say, actually foreclosure share is very

2:15-cv-01045-RFB-PAL

1 level at that period. The significant increase in foreclosure
2 share predates that. The key inflexion point is the acquisition
3 in March 2011 and all of this postdates that, but let me ask
4 you --

5 MS. GRIGSBY: Can I just object that?

6 THE COURT: Okay. Well, let's not have testimony.
7 Let's ask your --

8 MR. DAVIS: I would like to do --

9 (Court reporter admonishment.)

10 BY MR. DAVIS:

11 Q. So, one of the things that you said earlier today is you
12 thought it would be extraordinary that if revenue were to double
13 that compensation would double as well.

14 Do you recall saying that?

15 A. No, but it's possible I said that.

16 Q. It's possible that you said that.

17 If you would look at this internal document by Zuffa
18 doing an internal analysis, if you look at 2015, this is actual,
19 the revenues were 113 million and the wage share was 19 percent.
20 And Zuffa internally forecasted that if there was a precise
21 doubling of revenues to 226 million, wage share would remain as
22 exactly 19 percent. And so compensation would double precisely.

23 So this would be an example in this very case with this
24 very promoter that that extraordinarily unlikely thing would be
25 exactly what they predict.

2:15-cv-01045-RFB-PAL

1 **A.** You honestly think --

2 MS. GRIGSBY: Objection --

3 THE COURT: You guys, we have to stop. So, one,
4 overruled. Go ahead. And let Professor Oyer answer the
5 question.

6 THE WITNESS: You honestly think the question you're
7 asking me is the important takeaway from this slide?

8 THE COURT: Okay, but that's not the question. So I
9 appreciate your comment, but we --

10 THE WITNESS: We have wage share going up as challenged
11 conduct is taking place. I don't understand why you -- why
12 you're presenting this as somehow useful to the case you're
13 trying to make.

14 Having said that, they kept wage share equal. Yes,
15 they did. I did not know they had done that.

16 MR. DAVIS: No further questions, Your Honor.

17 THE COURT: All right. Thank you, Mr. Davis.

18 All right. Thank you, Professor Oyer. You are
19 excused.

20 THE WITNESS: You are done with me?

21 THE COURT: Yes, we are. Thank you.

22 THE WITNESS: Thank you.

23 THE COURT: All right, counsel. We have gone over the
24 time. I do not have time to handle, sort of, the logistical
25 stuff here. We will have to do this tomorrow. What we'll do is

2:15-cv-01045-RFB-PAL

1 we'll start off -- I'd ask you to be here at 8:15 and we'll try
2 to get started that early, if not at least at 8:30. And we'll
3 handle what we can logistically then, but I've given you some
4 extra time because of the fire alarm. But I do need to step off
5 the bench at this point in time.

6 MR. DAVIS: Your Honor, just as a housekeeping matter,
7 could I please read in the exhibit numbers of the two last
8 slides I used?

9 THE COURT: Well, let's do that tomorrow.

10 MR. DAVIS: Happy to do that tomorrow.

11 THE COURT: Or you can submit for the record tomorrow
12 and see if they challenge that.

13 MR. DAVIS: Okay.

14 THE COURT: I don't think that's going to be an issue
15 to that.

16 MR. DAVIS: I don't think it will be controversial.

17 THE COURT: Okay.

18 MR. ISAACSON: Just so we understand the order of
19 things tomorrow, we'll have -- is it rebuttal then argument and
20 then --

21 THE COURT: Right. So rebuttal and then argument. We
22 can maybe do some housekeeping. Then the argument will go
23 plaintiff, defendants, plaintiff. And so you'll each have --
24 I'll give you 45 minutes to an hour. For the plaintiffs, you
25 have to break that up. So you can't -- that doesn't mean -- for

2:15-cv-01045-RFB-PAL

1 both the main argument and rebuttal.

2 MR. DAVIS: And I -- probably you're just going to say
3 let's go home, but I will ask are there any issues that comes to
4 mind that would be particularly helpful for us to address.

5 THE COURT: Oh, no, I think you, though, that all can
6 glean from my questions the things that I think are going to be
7 significant. And I also try to elaborate on some of those as it
8 relates to plaintiff's argument in the minute order regarding
9 the briefing, so that should tell you something about the areas.
10 Because I expect us to cover a good portion of the arguments --
11 and, particularly from plaintiffs, what it is that you may or
12 may not be -- I wouldn't say giving up, but there's certain
13 areas of the motion that I think are stronger than others. I
14 don't think I've been very bashful about which areas I think
15 are -- those are.

16 And so it's helpful to me to know if you're proceeding,
17 for example, on issues of monopoly, what it is that looks like,
18 because I'm not sure that that's been fully elaborated or
19 whether or not you're simply arguing monopsony to me or whether
20 or not you're arguing monopsony, but taking monopoly into
21 consideration because of the impact of the market share on the
22 monopsony, which complicates these things further.

23 So that's as best as I can do as a non-econometrician.

24 So, with that, I will see you all tomorrow at 8:15.

25 MR. DAVIS: Thank you very much, Your Honor.

2:15-cv-01045-RFB-PAL

(Whereupon the proceedings concluded at 4:50 p.m.)

--oOo--

COURT REPORTER'S CERTIFICATE

I, PATRICIA L. GANCI, Official Court Reporter, United States District Court, District of Nevada, Las Vegas, Nevada, certify that the foregoing is a correct transcript from the record of proceedings in the above-entitled matter.

Date: September 12, 2019.

/s/ Patricia L. Ganci

Patricia L. Ganci, RMR, CRR

CCR #937